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Address

THE NEED OF MEDICAL COOPERATION IN LABORATORY WORK.

ADDRESS OF CHAIRMAN OF THE SECTION ON PATHOLOGY AND PHYSIOLOGY, AT THE FIFTY-EIGHTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION AT ATLANTIC CITY, JUNE, 1907.

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IOWA CITY, IOWA.

In accordance with past precedent and the dictates of our program, it is my privilege to say a few words of greeting, and I take this opportunity to express my appreciation of the honor accorded me in the selection as chairman of this Section. It is particularly gratifying to the Section to have as its guest for this meeting Prof. J. George Adami of Montreal, and I extend to him herewith on behalf of the Section a most cordial welcome.

As we meet here in the city by the sea it seems fitting to recall that this is the birthplace of the Section. In the seven years since its organization we have met in St. Paul, Saratoga, New Orleans, Atlantic City, in far away Portland, in Boston, and again in the city of its birth.

To those who have labored for the Section's welfare it should be a source of pride to note the recognition that has come to it as an active section of the Association. As an avenue for reporting the investigative work of the Association it has fulfilled its function. Many of the papers presented have been of recognized scientific value. A number contributed within recent years were reports of work carried on by special grant of the American Medical Association. Several joint sessions have been held with the Section on Practice of Medicine, and on Surgery and Anatomy, indicative of the recognized affiliation with the infant section.

No retrospect of this nature would seem complete without a generous acknowledgment of the help and endorsement of Dr. W. W. Keen, president of the Association at the time of the organization of the Section on Pathology and Physiology, to Dr. Ludwig Hektoen, its first chairman, and to Dr. Frank B. Wynn, the indefatigable director of the scientific exhibit, the father of the same and almost in the same sense related to this Section. That the success of the scientific exhibit has influenced the development of the Section we must freely acknowledge and the close correlation with the Section's work has been conducive to the scientific prestige of the organization as a whole.

In establishing this Section and encouraging its development the Association has recognized the need of a closer medical cooperation with general laboratory investigation, and to this idea I wish to direct a few remarks.

Six years ago while visiting a number of European medical institutions I was impressed with the new buildings at the Pasteur Institute in Paris; to the original institute and the new laboratory for biochemistry a well-equipped pavilion for infectious diseases had been added. The latter represented the many ingenious methods such as might be expected under the directorship of a Roux and a Metchnikoff, unique also in its glass-enclosed galleries, adjoining the rooms of patients, permitting continuous study without danger of contact. This renowned laboratory institute and pioneer of its kind felt the need of a hospital annex under its control in furtherance of its investigative and beneficent work.

Again in the new city hospital of Munich, built in 1900, I found a conjunction of laboratory and clinical work such as I had not then seen elsewhere, a laboratory of pharmacology, physiology, chemistry, experimental physiology, and pathology in close association with the hospital wards, under the same roof as it were, forming a cooperation unexcelled for teaching purposes.

Of a broader and slightly different character were the plans of the contemplated institute at Vienna, which, though rather slow in its development, is to be a scientific institute patterned after the Pasteur Institute, comprising the departments of experimental pathology, physiology and pharmacology, with closely connected hospital facilities, all to be under the directorship of Professor Paltauf. Reference could be made to the institute of Professor Ehrlich at Frankfort-on-the-Main and similar institutions, but those mentioned are representative types.

Since then the spirit of this new departure in scientifice medicine has come across the sea, and it is gratifying to note the extent to which it is developing in our country. A pioneer of its kind is the combined laboratory of experimental medicine, pathology, physiology and medicine and surgery at Johns Hopkins University which was established three years ago. Here diseased animals are treated and the student learns medicine and surgery. Diseased conditions simulating those occurring naturally are produced. Methods of physiology and clinical methods are applied to study the immediate and late effects; the end results are studied by the methods of pathology.

The demand for a closer cooperation between the worker in the laboratory and the hospital ward is met in part by such institutions as the Memorial Institute for Infectious Diseases at Chicago, the Rockefeller Institute for Medical Research, the William Pepper Laboratory of Clinical Medicine, the several institutions for the investigation of cancer, for the study of tuberculosis, and numerous hospitals affiliated with university medical colleges.

The requirements of the time recognize that a hospital does not perform its true function unless it aids

in the diffusion of knowledge, and this it can not do without a closer investigation of problems that come within its sphere. Municipal and state laboratories have a further duty than the making of routine examinations, and should engage in some form of investigation.

In the perfect organization of the clinical departments affiliated with European hospitals our confrères across the sea further illustrate the tendency of the newer medicine. The clinical chief with his broad grasp on the bearing of pathology, physiology and chemistry on clinical medicine has associated about him a corps of laboratory workers who, by well-directed investigation, give to the German clinic particularly the prominence which it enjoys to-day.

It is generally recognized that the many interesting problems confronting the medical investigator to-day permit of elucidation and study often better in the living, at the bedside, than by autopsy study or other pathologic methods, and in this connection it can be stated that the most significant advances in pathology are being made in the study of the nature and mode of action of the causes of disease. There is reason to believe that the contributions to pathologic and physiologic knowledge during the next decade will come as freely from the clinical worker as the purely laboratory investigator.

It is but a matter of recent memory when our entire conception of pathology consisted of the study of morbid anatomy or histologic lesions. As the scientific viewpoint of pathology has enlarged physiology and physiologic chemistry have been accorded their due recognition as most important factors in advancing the knowledge of the nature of disease processes, the latter, in fact, having largely overshadowed the former. It is a further significant fact that in a process like diabetes with an unknown morbid anatomy our knowledge of the pathologic physiology or the metabolic and functional disturbances is more complete than in many disease conditions with definite lesions.

An alliance of pathology with experimental therapeutics opens up a field for interesting and profitable research for specific chemical studies. Physical chemistry offers an encouraging prospect of shedding new light on many obscure biologic phenomena. Giving to pathologic and physiologic study a broader meaning but indicates the wider application of the methods of true science in all lines of medical work; it is suggestive of that greater seeking for truth, to get at the root of problems which is so peculiar to our time, all with the common goal to learn more of the nature, prevention and the cure of disease.

It is gratifying to note how with each year the range of problems of successful attack by the American laboratory is increasing, yet there is need to emphasize that continued medical cooperation is essential in all investigative work if we would keep scientific medicine in America on a par with that of the old world.

Tuberculosis.—Tuberculosis is a house disease. The battle is in our own hands. We must meet it squarely and bravely, like men. It is not to be overcome by fear, and we use the word advisedly, by fear either of the disease or of loss of income from our investments, should we build suitable habitations for those who must, from force of circumstances, live in the evermore crowded districts of our great cities. In these localities men have deemed life of less value than money, and such views mean dark, ill-ventilated dwellings and disease.—*Journal of the Outdoor Life.*

Original Articles

THE RELATION OF THE CIRCUMLENTAL SPACE TO THE CAUSATION OF GLAUCOMA AS SHOWN BY THE WURDEMANN LAMP.*

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It is obvious that this disease is caused either by excessive secretion in the eye, or by obstruction in its outlets, or both.

Hippocrates applied the term glaucoma to all opacities behind the pupil. Taught by dissection, Brisseau[1] was the first to announce in 1709 that, while cataract was an opacity of the lens, glaucoma was a similar affection of the vitreous humor; therefore, no operation could afford relief. Mackenzie early in the last century recognized the disease as one of pressure, stating that:[2]

> **A morbid secretion, of the origin of which we can give no accurate account, fills the cavity of the retina, but, like other morbid productions, is not furnished with the apparatus of removal, necessary for keeping its quantity *in equilibrio*. Hence the unnatural firmness of the glaucomatous eye, a symptom that often increases to such a degree that the organ is felt to be of a stony hardness.**

Von Graefe believed the pressure was due to a chorioiditis with exudation. When the invention of the ophthalmoscope showed that the chorioid did not show any anatomic changes in this tissue he assumed that there was a serous exudation present. Donders ascribed the increased pressure to irritability of the ciliary nerves, causing excessive secretion from the chorioidal vessels. Stellwag believed the starting point of the disease to be an increased pressure in the intraocular blood vessels, obstructing the vortical veins where they make a sharp turn at their exit from the globe.

In support of the exudation theory Beltman[3] recently reported a case of chronic glaucoma associated with an enormous telangiectasia of the face, and dilatation of the external blood vessels of the eye, narrowing of the field of vision, increased tension and pain. The glaucomatous pressure was most severe just before the menstrual period, when the blood pressure is known to be the greatest. He held that a corresponding dilatation of the chorioidal vessels increased the secretion of fluids in the eye.

In 1873 Leber[4] showed that the path of the aqueous humor is from the ciliary processes through the pupil to the spaces of Fontana, called the filtration angle of the eye. Three years later Knies and Weber[5] independently found closure of the filtration angle, and of the canal of Schlemm in most cases of chronic glaucoma. This discovery gave a great impetus to the retention theory. It should be noted that in most cases of acute glaucoma these outlets are unobstructed.

Ring[6] saw glaucoma lighted up by the instillation of euphthalmin solution into the eye. We are told not to use atropin, cocain or even adrenalin in solution where there is a tendency to glaucoma, through fear of compressing the filtration angle; but only recently I

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*Read in the Section on Ophthalmology of the American Medical Association at the Fifty-eighth Annual Session, held at Atlantic City, June, 1907.

1. Mackenzie (William): Diseases of the Eye, 1833, 583.
2. Ibid., 586.
3. Congenital Telangiectasia of the Eyes as a cause of Simple Glaucoma, Graefe's Arch. f. Ophth., lix, 502.
4. von Graefe's Archiv. xix, No. 2, 87.
5. Ibid., xxii, No. 3, 163, and xxiii, No. 1, 1.
6. Glaucoma from Euphthalmin, Trans. Am. Ophthal. Soc., 1903.

had a patient with acute glaucoma referred from a physician, who had used a solution of atropin for the intolerable pain, thinking he was dealing with a case of iritis. The pain soon subsided, vision was reduced to fingers, but gradually rose to 3/50. When an operation was suggested the patient dropped out.

Intraocular tumors produce secondary glaucoma by causing increased pressure in the vitreous, while posterior synechiæ, anterior staphyloma from injuries, dislocation of the lens, and serous cyclitis obstruct the outlets of the eye, the latter clogging the filtration angle with albuminous fluid.

Sala found an excess of albumin in the aqueous humor in two cases of contusion of the eyeball, followed by glaucoma.[7] Peters[8] corroborated this by citing four cases of glaucoma after contusion, with the aqueous loaded with albumin. He suggested that the traumatism caused paralysis of the ciliary body and consequently an increased secretion of albumin, impeding filtration.

Bartels[9] incised the conjunctiva in four or five places in rabbits and dogs, passing threads behind the muscles from one slit to the next and tying the threads. He produced a condition similar to acute glaucoma, injection of the conjunctiva, anesthetic cornea, wide pupils (except in rabbits), and increased tension. There was absence of obstruction in the filtration angle in all cases. He concluded that obstruction in the anterior ciliary venous circulation is the probable cause of glaucoma.

According to Priestley Smith,[10] the lens increases in diameter one-tenth and in volume one-third between the ages of 20 and 60. He holds that hyperopic eyes are most liable to the disease, for in these the lens develops out of proportion to the dimensions of the eye, pressing against the filtration angle. He claims also that a narrow cornea goes with a small eye; and in patients whose corneal diameter is not more than 10 mm., few escape the disease.

I examined the eyes of 200 persons of all ages to see to what extent the lens encroached on the ciliary processes as age advanced. I applied the Würdemann lamp to the margins of the lids at the outer canthus and looked obliquely through the pupil. When one eye is affected with glaucoma, the other may be examined by using alypin for a local anesthetic, as it does not increase the tension of the eye, but rather decreases it. If the observer looks forward far enough into the normal eye, he sees the ciliary body as a dark ring."[11]

The space between the rounded margin of the lens and the ciliary processes is given as 0.5 to 0.6 mm. The lens being about 9 mm. in diameter, if this diameter were increased one-tenth, it would come near to the ciliary processes; then any unusual congestion might cause trouble.

An eye affected by glaucoma has a narrow circumlental space, as a matter of course. It is also narrow in all cases in which, after middle age, the lens is pushed forward so far as to render the anterior chamber shallow. This condition is common with people who die of old age and who never had glaucoma. Since commencing this line of investigation. I have noticed many cases in which the anterior chamber was very shallow, and the circumlental space also, yet there was no increase of tension. I have noticed also that the members of a family in which glaucoma has appeared all have a narrow circumlental space. I have not seen a case of narrow cornea, all the cases of glaucoma that I have seen having corneas measuring 11.5 mm. Hyperopia is common, but some cases are emmetropes.

Priestley Smith, with scientific fairness, remarks,[12] "the obstruction at the outlet, discoverable in eyes blinded by glaucoma, explains the excess of pressure in the chambers, but it does not reveal the starting point of the disease." He describes an apparatus for injecting the eye,[13] consisting of two flexible tubes, each being provided with a pinch tap, and ending in hollow needles. These tubes are suspended at the same height. The eyes of a sheep are removed immediately after death and injected while they are still warm. One of the needles is inserted into the aqueous chamber, and the other into the vitreous chamber. The fluid in the tubes is a 1 per cent. solution of anilin black. When the tubes are at the same height, the fluid passes through the filtration angle, and flows from the cut ends of the episcleral veins. Now, if the tube connected with the vitreous chamber is elevated above the other, the process of filtration stops; the lens and iris advance, and there is no escape of fluid from the severed veins.

It would seem that chronic glaucoma must be caused by excessive pressure in the vitreous chamber, caused by diseased blood vessels in the uveal tract; at the same time there is probable alteration in the constitution of the aqueous humor, which blocks up the outlets. We have seen that this alteration in the fluids produces glaucoma after traumatism, and in serous cyclitis; and Troncoso claims to have found an excess of albumin in eyes affected by chronic glaucoma. Why may not the ciliary process secrete albumin when age has changed the character of the blood vessels?

If sympathectomy ever relieved the intraocular tension, it did it through its influence on the circulation in the chorioid and the ciliary processes. The same must be said of iridectomy. It does not reduce the tension immediately, showing that its influence is exerted on the intraocular circulation. Another thing pointing in the same direction is the fact that in some cases of iridochorioiditis with diminished tension, it is increased by an iridectomy.[14]

My thanks are due to Dr. Myles Standish, Dr. H. B. Chandler and their assistant, Dr. Clap, in the Eye and Ear Infirmary, for their courtesy in allowing me to examine their patients.

7. Glaucoma Following Discission and Contusions of the Eyeball, Klin. Monatsb. f. Augenh., April, 1904.
8. Glaucoma After Contusions of the Eye and Its Treatment, Klin. Monatsb. f. Augenh., Dec., 1904.
9. Ueber Blutgefässe des Auges bei Glaukom, und ueber experimentelles glaukom durch Versperrung von vorderen Abgeführenden Blutbahnen, Berlin, S. Karger, 95.
10. Norris and Oliver's System, iii, 650.
11. Würdemann (H. V.): Ophth. Rec., November, 1906.

THE SURGICAL TREATMENT OF CHRONIC GLAUCOMA.*

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There is probably no form of ocular disease which has excited more interest or which affords, in some of its clinical features, more reasonable opportunity for opposing opinions than chronic glaucoma.

Although it is my purpose in this paper to discuss the surgical treatment of the disease, it is, first of all, impor-

12. Norris and Oliver's System, iii, 633.
13. Ibid., 632.
14. Berry (George): Diseases of the Eye, Art. Glaucoma.

*Read in the Section on Ophthalmology of the American Medical Association at the Fifty-eighth Annual Session, held at Atlantic City, June, 1907.

tant that we should entertain a common understanding of the clinical picture had in mind.

For a generation there has been no doubt in the minds of experienced surgeons as to the necessity and signal value of iridectomy in the treatment of the inflammatory types of glaucoma. But in so-called chronic, simple, or non-inflammatory glaucoma there has been much diversity of opinion as to the value of surgical interference.

It is probable that the adverse views which have been and are still entertained by different surgeons depend, in large measure, on the mental concept entertained by the individual surgeon of both the nature of the disease and the exact clinical picture had under consideration.

It can not be denied that there is room for doubt as to the exact nature of certain comparatively rare cases of ocular disease characterized by steadily increasing impairment of vision, a concentric narrowing of the field, and typical glaucomatous cupping of the optic nerve, but with entire absence of pain, inflammatory signs, demonstrable increase of tension in the globe or notable exacerbations in the clinical history. The progress in this group of cases is steadily onward toward blindness, much as in simple atrophy, unless it is possible by treatment to arrest its course.

There is a wide reach between this picture of glaucoma simplex and, for example, the stormy manifestations of disease afforded by glaucoma fulminans, with its violent objective and subjective signs of inflammation, the stony hard ball and almost sudden abrogation of functioning power. Between these extremes, however, lies the large group of cases with which we are all familiar and which I believe to be those our chairman wishes me to discuss. A careful study of this group, however, will serve to show that at some time in their early history these patients have manifested the symptoms of disease so vaguely as to leave both patient and surgeon in doubt: The former as to whether anything is actually wrong with his eyes, whether he is not, after all, the victim of his imagination; the latter in doubt, certainly as to the nature, perhaps even of the existence, of a disease of which he now and again gets vague glimpses only, but which for many weeks or months, it may be, eludes his most subtle means of analysis and leaves his diagnosis suspended until such time as the cupping nerve, the contracting field, the increasing impairment of central vision shall have declared its nature. In a word, till the condition has passed from the stage of incipient glaucoma simplex into the stage of easily recognized chronic glaucoma.

The question for the surgeon to answer to his own satisfaction is: Does this subtle, but colorless, progressive malady belong in the same category with inflammatory glaucoma? The answer given to this inquiry will, in great measure, determine both the course and vigor of his advice and treatment.

Our unwillingness to answer it definitely in the affirmative is the cause of the vague and variable condition of the literature of chronic glaucoma and affords sufficient reason for the timid and vacillating treatment of the disease during its early stage. That the affirmative answer is too often, or too long, withheld in individual cases should not cause surprise. The indeterminate clinical history, in a relatively small group of cases, is maintained to the end; that is to say, until irretrievable blindness has resulted before the inflammatory stage of the disease is reached. Then, sooner or later, come the engorged long anterior ciliary vessels, the hard eyeball, the completely atrophic, deeply cupped nerve, and pain, with more or less well-pronounced inflammatory signs.

Fortunately, however, in many cases new and more determinate features are added to the clinical progress of the disease which prompt the timid surgeon to definite action before it is too late. These symptoms are generally slight, transient exacerbations of increased dimness of vision, with suggestion of discomfort or actual pain, accompanied with a sense of fulness in the eye and periorbital region supervene.

The patient may ascribe the symptoms to overfatigue after a hard day, to some error in diet, to overuse of the eyes or to dim or too bright light. After rest the acute symptoms disappear and may not recur for many weeks or even months, but the impression has been left on the mind of the patient that the eyes are not so good as they were before the attack of dimness. Recurrences, however, are sure to follow and they come with increasing frequency and variable severity. The recovery after each exacerbation is not so complete as at first. The impairment of vision soon becomes permanent even between the attacks, but worse during their continuance, and pain becomes a well-marked feature. Halos are observed around the gas flame or lamp, and the eyes are injected, it may be but slightly. The cornea is steamy, the tension of the ball is increased even between attacks, but is variable, being greater during the recurring more acute exacerbations at which time the sensibility of the cornea is diminished. If no treatment is instituted this history may be pursued for long periods of time, finally causing complete loss of vision with atrophy and characteristic cupping of the nerve. In other cases following on some unusual stress, as ill fortune, or some cause for grief, the scene closes with a sudden attack of glaucoma fulminans.

The dangers which cluster thickly about the clinical history of chronic glaucoma are greatly enhanced by this subtle beginning and the variable and treacherous course of the disease which has been briefly described. There is no form of ocular disease in which early recognition and well-defined views as to its nature and treatment are more important; for, if treatment is delayed until the delicate retinal fibers, where they emerge over the scleral ring, are injured too greatly by the recurring periods of increased tension of the globe, it is not to be expected that any procedure whatever can restore their function.

The greatest danger of delay on the part of the surgeon is in the group of patients in whom the disease progresses without obvious exacerbations; that is to say, in cases in which there has been demonstrable hardness of the ball or attacks of extraordinary dimness of sight. Here the inquiry may reasonably be made, Why operate, or, for that matter, why use miotics, in an eye in which increase of tension has never been observed, since both the miotics and iridectomy are employed with the ostensible design of reducing increased tension?

In reply it may be observed that increased tension of the eyeball is always relative. In the first place, it is probable that our mental concept of normal tension is an overestimate for many eyes. That is to say, for some eyes, e. g., those with a thin sclera, a degree of resistance to palpation which would be normal for many eyes is excessive and amounts to an increased hardness, sufficient, indeed, to account for the cupped nerve. For it is fair to assume that in the eye with a thin sclerotic coat there will be also a relatively too readily yielding lamina cribrosa.

Then, too, it is not only possible but it is rendered

probable by certain clinical signs that mild exacerbations of increased tension coming on especially in the night often pass without recognition by the patient. Many persons ascribe their insomnia to ocular discomfort, and this symptom is frequently ameliorated by the use of weak solutions of eserin salicylate instilled at bedtime. The same drug will often relieve also the weak eyes and occipital pains with which many patients awake early in the morning.

There is, moreover, a rational basis for this, in some measure, *a priori* reasoning. The patient retires for sleep after the fatigues of the day and assumes a recumbent posture. The lights are extinguished and the pupils dilate, blocking the spaces of Fontana as effectually as though a mydriatic had been employed, thus furnishing conditions which delay excretion of the intraocular fluids and favor increase of tension in the globe.

That this deductive reasoning is based on a correct premise seems to find corroboration in the well-known frequency with which attacks of acute, inflammatory glaucoma come on in the night, during sleep, in patients with glaucoma imminens. We are justified, therefore, in assuming that in cases of marked cupping of the nerve without any increase of tension ever having been observed, that it had nevertheless occurred, possibly in the night or during sleep, an inference which finds additional force in the observed clinical fact of the well-known relation, under all ordinary circumstances, between the cupped nerve, contracted field of vision and increased tension of the ball.

It is believed that the suggestions in the preceding pages will find corroboration in the following clinical histories of carefully observed cases occurring in my private practice, in all of which opportunity was afforded for continuous observation for long periods of time. After careful consideration this course was chosen in preference to carefully applied statistical tables of large numbers of both private and clinic patients, in many of which the clinical history was incomplete.

CASE 1.—Chronic Glaucoma in Right Eye. Iridectomy, followed by Creeping Non-inflammatory Glaucoma in the left, Culminating in an Attack of Acute Inflammatory Glaucoma and Permanent Loss of Vision.

Patient.—Mrs. M., aged 50, was sent to me by her physician in 1879 for failing vision in the right eye. She had been treated several months for recurring right hemicrania, which had been regarded by her physician as the cause of the pain and loss of sight in the right eye. The eyeball was hard, pupil dilated, cornea slightly hazy and lacking in sensibility. Vision was reduced to one-fourth or less, 20/lxxx, and the field to a small area in the temple side. The nerve was deeply cupped and atrophic. The left eye was aparently normal in all respects. V. = 20/xx.

Operation.—A broad upward iridectomy was performed on the right eye which gave rapid and complete relief from pain, and vision rose to 20/lxiv, with normal tension of the globe and some improvement in the field.

Postoperative History.—There was no recurrence of the glaucoma and vision was maintained for two years, then slowly sank through atrophy of the optic nerve until total blindness was reached in 1884, five years after her first consultation. In October, 1883, she was alarmed over a spell of dim sight in the left eye while at her dressing table preparing for an evening entertainment, and she came to see me the following morning. The impaired vision lasted less than ten minutes, she thought, but she then related that the trouble in her right eye began in the same manner several years before I had seen her, and was repeated at varying intervals until it had culminated in the "neuralgic" attacks in the eye, which both she and her physician believed were caused by the hemicrania; she declared that she now knew better, and begged that something be done to arrest the disease in the left eye.

Treatment.—The vision was 20/xx; there was no contraction of the field and tension was normal. She received eserin solution to be used in the event of another attack, which unfortunately followed the first in a few weeks, coming on in the evening again after a fatiguing day in the shops. These attacks continued to occur at long but varying intervals for a year and a half, but were relieved in a few moments by the instillation of the eserin solution, which she kept constantly at hand. The exacerbations occurred invariably in the evening, but had always disappeared before she could get to my office for study, so that up to this time I had not seen her during an attack.

April 10, 1884: V. = 20/xx, and there was but little if any variation from the normal in the field of vision, but there was a quite obvious cupping of the nerve at the lower border. The lower temporal portion of the nerve was gray. She was then told of the undoubted character of the disease and that it would surely pursue a similar history to that of the right eye, and was urged to consider the necessity for operation in the near future. The fate of the neglected right eye, so far from convincing her of the wisdom of early interference, as it should have done, had the directly opposite effect on her mind.

Jan. 24, 1889: I did not see her again until this date, nearly five years later. In the meantime, however, she had continued to use the eserin solution with increasing frequency on her own responsibility, until its daily use had become a constant habit. She had, as a result, a chronic granular conjunctivitis. V. = 20/xl. The field of vision was contracted, nearly concentrically, to about 30° on the perimeter chart, with an additional cut in the lower nasal field. The cornea was clear, the pupil reacted, but somewhat sluggishly, to light and shade and contracted under a miotic. The anterior chamber was shallow, tension doubtfully +1. The nucleus of the lens was gray and ophthalmoscopic examination difficult. Operation was then strongly urged but declined. She received a stronger solution of eserin salicylate to be used twice daily. Under this vision rose to 20/xxx and the field was broader.

May 22, 1889: Her visits had been discontinued for the previous five months, but the miotic was continued. Vision remained at 20/xxx, and there was no notable change in the field, notwithstanding the fact that she had many attacks of transient impairment of vision, which she observed were apparently precipitated by eating fruits, especially peaches or grapes. She again declined to submit to iridectomy, and did not return until November, 1889, the miotic having been steadily employed. In the meantime her husband had suffered financial ruin and died. Her vision had sunk to 1/10, the pupil was habitually dilated, but contracted under a strong solution of eserin; the field was so much contracted that she found difficulty in going about without an attendant, the lower half of the field of vision being entirely absent. The dilated pupil permitted a study of the nerve, which was now deeply cupped. She was having moderate pain. The ball was rigid but not very hard.

Nov. 28, 1889: While using the eserin solution three times daily she suffered a violent attack of acute inflammatory glaucoma, which came on in the night. The following morning the ball was stony hard; there was no perception of light. She was suffering intense pain and begged for immediate operation, which was performed under general anesthesia in the afternoon after a cautious paracentesis in the morning. On the third day she had conjunctival inflammation with chemosis, which subsided under treatment. The pain and tension were entirely relieved, the wound healed kindly, but convalescence was tedious. Vision slowly returned.

Feb. 2, 1891: Fourteen months after iridectomy, V. = 20/cxxvi. The lower field was blind, even for candle flame. Two months later vision was only 2/cc, eccentric fixation, and sank rapidly to total blindness. She lived about two years subject to the most distressing visual hallucinations.

This unfortunate history can not be contemplated without sadness. There can be but little doubt, in the light of many other experiences, that blindness would have been prevented in both eyes of this patient had a skilful iridectomy been performed in each during the

early stage of the disease. In the first eye the glaucoma was cured by the operation, but too late to avert blindness by progressive atrophy of the optic nerve. In the second eye she would not submit to operation until too late.

The history, however, seems to show the danger and futility of relying with too great confidence, certainly in all cases, on the sufficiency of miotics in averting the fatal denouement.

The following history of a patient who came under observation during the same years as the previous case seems to justify the conclusions just formulated.

CASE 2.—Chronic Glaucoma, Exacerbations of Subacute Inflammatory Glaucoma, Following Many Years of Recurring Attacks of Dim Vision without Pain or Redness of the Eye.

Patient.—Mrs. T., aged 40, consulted me in November, 1887, with chronic glaucoma. She related that she had consulted two eminent colleagues, the first in 1875, the second in 1876, both of whom had advised iridectomy, to which she had not submitted. Her vision had been failing steadily for a long time before consulting them, but she had frequent attacks of dim sight, lasting at times for a few minutes only, but often for several hours. These attacks had not been acompanied by pain or redness until 1878. The tension was, in the right eye, + 1. V. = 20/lxx. The pupil showed a tendency to dilate, there was a well-marked glaucomatous cup and an intermittent pulsation of the lower temporal retinal artery. Left eye, V. = q. p. l. T. + 2, pupil dilated, deep glaucomatous cup and retinal pulse. Some ciliary injection and pain.

Operation.—Iridectomy was performed under general anesthesia in both eyes, with an interval of one week. The symptoms were entirely relieved, the fields of vision improved in both eyes and vision had improved on July 10, 1879, eight months after the operation, in O. D., with correcting glasses, to 20/lxiv; in O. S. to 20/cc. Eleven years later vision in the right eye was 20/xxx, but in the left there was nearly complete blindness, with a total atrophy of the nerve. In October, 1906, I saw this patient, then 68 years of age, alight from a railroad train and pursue her way unattended, evidently seeing her way about with ease.

CASE 3.—Non-inflammatory Glaucoma in both Eyes, Progressive Loss of Vision and Contraction of Field, Deep Glaucomatous Cupping of Both Nerves. No History of Exacerbations; Constant Headache; Iridectomy in Both Eyes at One Sitting.

Patient.—Mary F., aged 24, a mulatto, came to see me in 1878 because of rapidly failing vision and constant headache. There had been no inflammatory symptoms at any time and no exacerbations of ocular disturbance, with the sole exception of increased pain in the head from time to time, which radiated from the eyes and periorbital region to occiput, often keeping her awake at night. The failure of vision had been rapid until she at last found difficulty in doing work about the house. She stumbled over chairs, knocked things over on table and mantelpiece, etc. This proved to be due to marked contraction of the field of vision, which at no point was wider than 40°, and was only 10° in the upper and lower fields of each eye. Central vision was 20/xl in each, and tension was normal. Both optic nerves were gray, devoid of capillaries and deeply cupped.

Operation.—She was admitted to the Episcopal Hospital and a broad upward iridectomy performed on both eyes at the same sitting, under general anesthesia, on June 7, 1878. The convalescence was uneventful, and on July 23, 1878, with correcting glasses, central vision remained at 20/xl, but the field was wider.

Postoperative History.—This patient was kept under observation for many years. She married and gave birth to several healthy children. She was last seen at the Wills Eye Hospital, March 16, 1894, sixteen years after the iridectomies were performed. She still had high grade of astigmatism in both eyes, but with careful correction O. D. V. = 6/vi, O. S. V. = 6/ix, miscalling confusion letters with each eye. The field of vision in the right eye, temple 76°, nasal 10°, lower temple 55°, lower nasal quadrant blind, upper temple 40°. In the left eye, temple field 76°, lower and upper temple quadrants 40°, upper nasal 10°, lower nasal 50°.

This patient, who at 24 years of age presented all the classical signs of advancing glaucoma simplex, i. e., absence of increased tension or inflammation, but with characteristically cupped nerves and contracted fields, sixteen years later was found with a permanent improvement in both central and peripheral vision and without any advance in the atrophy of the nerves.

CASE 4.—Myopic Astigmatism.

Patient.—Mrs. McC., aged 30, was referred to me by Dr. George M. Gould in June, 1897. She had for many months been using eserin under Dr. Gould's advice.

History.—There was a deep glaucomatous cup in both nerves and marked contraction of the field of vision in the right eye, to 30° in the temple and lower, 20° above and to 10° in the nasal field. The increase of tension was apparently slight, but the balls were large and the sclera thin. There was a broad, atrophic, myopic conus at the temporal side of both optic nerves. In the right eye, with correcting glass V. = 20/c (1/5). The left eye had only quantitative perception of light, T. = + 1. She was suffering from violent periorbital and occipital headaches, was extremely nervous and hysterical, and was a victim of vaginismus, which had been the cause of much domestic discord. There had never been inflammatory symptoms or exacerbations of ocular disturbance.

Operation.—She was admitted to the Wills Eye Hospital and a broad, peripheral iridectomy was performed on both eyes. The periorbital and occipital pain promptly disappeared and the field of vision in the right eye markedly improved in all directions. The left eye resumed normal tension and was free from pain, but remained blind.

Postoperative History.—Nine years later this patient returned with an acute conjunctivitis. There had been no return of glaucoma, and the acuity of central vision remained as in 1897, so that she was able to earn a living for herself and three children as a music teacher.

It is interesting to note that, after the relief from her simple glaucoma by operation, her general neurotic condition had greatly improved and she had given birth to three children.

It is obvious that the iridectomy had saved the right eye from the fateful dénouement of the simple glaucoma which had befallen the left under the steady use of the miotics alone.

CASE 5.—Chronic Non-inflammatory Glaucoma, Entire Absence of Pain or Tension. Iridectomy in Both Eyes.

Patient.—Mrs. K., aged 77, a tall, spare, swarthy woman with stalwart frame, was brought to me in March, 1895, by Dr. S. W. Wiley, of Norristown, Pa., complaining only of her failing vision, supposing it to be due to cataract. The vision had not been good for many years, but failure had been more rapid during the last year.

Examination.—O. D. H. = 3.D., with correcting glass, V. = 1/lx, and nasal field cut to fixation point, temple 50°, 30° above and below. The pupil reacted sluggishly, the tension was doubtfully increased, but the eyeball was rigid. The media were clear. The nerve was greenish and deeply cupped to its scleral border, except at the nasal side, where the vessels emerged in a peculiar manner from the apex of a deep physiologic excavation. There was a slow, occasional pulse wave in the lower temporal artery. In O. S. with her correcting glass + 4 D. V. = 6/xviii. Field cut to near the fixation point on nasal side, but temple field nearly normal. T. = + ? Pupil reacted to light and contracted under eserin promptly. The nerve was cupped as in O. D., but was obviously less atrophic. Iridectomy was advised in both eyes as the only means of arresting the disease, but an unfavorable prognosis was given. She received a solution of eserin to be used as freely as possible without causing pain, and returned to her home in the center of the state. She returned after two weeks with marked improvement in central vision in both eyes, but a more pronounced cut in the lower field of each.

Operation.—A broad peripheral iridectomy was performed on the left eye and six days later on the right. Recovery was rapid in each and uneventful.

Postoperative History.—April 18, 1895: The tension was subnormal in both eyes. In O. D. vision had risen to 6/lx, and the field of vision for form had widened to nearly normal, except an area of blindness even for candle flame, which included almost the exact lower nasal quadrant. In the left eye the temporal field was nearly normal, but the entire nasal field was blind to candle flame. With + 3.00 s ⌒ +3.00 cy ax 165° V. = 6/xii.

May, 1895, a month later: V. in O. S. same, but in O. D. V. had risen to 6/xviii.

November, 1895, six months later: Vision in the right eye had slowly fallen again to 6/xlviii, with a concentric narrowing of the remaining field.

Oct. 10, 1898: The optic atrophy had steadily progressed in the right eye to nearly total blindness, approximately three and a half years after the operation, but at no time had there been any increase of tension or other renewed signs of glaucoma.

The left eye, however, in which the onset of the disease was more recent and the cupping of the nerve and atrophy less advanced, retained vision 6/xxiv, with no further change in the fields until the patient's death on Aug. 9, 1900. More than five years after the iridectomy.

There can be no reasonable doubt that had the iridectomy been performed at an earlier date this patient would have been spared blindness from atrophy in the right eye also. Had the operation been done before the serious impairment of the fields of vision in both eyes I am convinced that she would have enjoyed throughout the remainder of her life approximately normal vision.

This conclusion would seem to find adequate corroboration in the history of the following patient, referred to me for operation by a colleague. Incidentally this case is introduced to represent a large group of patients operated on in private practice within the last ten years, seven of them within the last two years, in all of whom useful vision had been destroyed in one eye when first seen and the disease was already passing into the inflammatory stage, while in the other eye the disease was still in its incipiency. In all of them glaucoma has been completely arrested in the second eye by operation, and at the present date without exception they enjoy approximately normal vision. The fate of the blind eye, furthermore, illustrates the danger of deferring operation even under the steady and judicious employment of a miotic.

CASE 6.—Chronic Glaucoma.

Patient.—Mrs. J., aged 60, consulted me Feb. 21, 1906. She had been using eserin under close observation for more than two years. Notwithstanding this, she had suffered exacerbations of dim sight from time to time, but no severe pain. Her vision in October, 1904, was in O. D. 20/xxx, in O. S. 20/xv.

Examination.—When seen by me it had sunk in O. D. to 10/cc. eccentric fixation. In O. S. to 20/xxx. O. D. T. = + 2, pupil dilated, A. C. shallow, media transparent, deep cupping, nerve atrophic, and marked pulse in both upper and lower temporal arteries. The sensibility of the cornea was impaired and only a small island remained in the temporal field near the fixation point. There was severe pain. O. S. V. = 6/ix, T. = N (+ ?), ball had a rigid sclera, pupil reacted to light, A. C. was shallow; there was a beginning cup at the lower border of the nerve, no retinal pulse, and no marked impairment of field.

Operation.—She was admitted to the Wills Eye Hospital and a broad peripheral iridectomy was performed on the right eye on Feb. 26, 1906. The convalescence was uneventful. The pain and tension were promptly relieved and she was discharged from the hospital on March 7, with no improvement in the field.

Subsequent History.—She was readmitted to the hospital and on March 19, 1906, iridectomy was performed on the left eye. Convalescence was normal till March 21, when she had a sudden pain, probably from injury during sleep. The following morning the anterior chamber was filled with blood. This was rapidly absorbed and recovery progressed without further incident. On May 18, 1906, two months after operation, with + .25 s ⌒ + 1.25 cy. ax. 170° V. = 6/v, and the field of vision was normal in all respects.

March 23, 1907, one year later: O. D. V. = only q. p. l., optic nerve atrophic. O. S. + 1.25 cy. ax. 170° V. = 6/v. T. = N. in each eye. Eyes are white and free from pain.

CASE 7.—Simple Glaucoma.

Patient.—I. L., aged 41, consulted me May 28, 1898, with simple glaucoma. At that time the right eye was apparently normal with V. = 6/vi and no restriction of the field. In the left eye vision was reduced to 6/xv and a marked cut in the nasal field, the upper nasal quadrant being cut to almost fixation point. The anterior perforating vessels were full and tortuous. There was an arterial pulse in both upper and lower temporal arteries and a well-marked glaucomatous cup.

Operation.—Iridectomy was advised and performed on the left eye May 30, 1898. The operation was smooth and recovery without incident.

Subsequent History.—This patient was kept under observation at short intervals until September, 1899, at which time there was a distinct cupping of the right optic nerve and a progressive narrowing of the field of vision, but worse in the upper nasal quadrant. In a word, the eye was obviously pursuing the same history as the left had done before the operation. Vision in the left eye had risen to 6/x, and the field of vision was markedly improved in all directions except the upper nasal quadrant, which remained unchanged. Iridectomy was then advised for the right eye also, but declined. Nothing more was heard from this patient until during the preparation of this paper, when the vision in the left eye was found unchanged, but the right eye, on which she had rejected the advised operation, was totally blind.

This brief history of Case 7 is introduced to give the reverse of the picture as set forth in Case 6. Here the operation on the left eye had been accepted early enough in its history to save the vision, whereas the right eye, which was not operated on and which was the better when first seen, had been allowed to take its course uninterruptedly to the end.

The case histories which have been introduced are selected simply for illustration and to demonstrate the claim which has been made in the introductory remarks, viz., that the clinical history of glaucoma simplex, chronic or non-inflammatory glaucoma, when followed from the incipiency of the disease during long periods of time, demonstrates that the affection belongs, in its essential character, in the same category with glaucoma fulminans, or acute inflammatory glaucoma; that the latter violent manifestation of disease is in fact but the dénouement of the former. In a word, the symptom complex we have recognized as glaucoma imminens is a steadily advancing simple glaucoma, which, under the stress and strain of life, and the pathologic changes in the organism which come on and advance between the forty-fifth and sixty-fifth years of age in large numbers of people, under favoring ocular conditions culminate in the types of disease under discussion.

It is true that in a considerable number of individuals the culmination into acute inflammatory disease, for many reasons, may never come, but may, nevertheless, end in total blindness, beginning and ending as a purely local manifestation of disease. But add to the local affection some general dyscrasia—notably the rheumatic or gouty diathesis with the accompanying disease of the general vascular tree and the associated impairment of the general nutrition—and it is easy to conceive how the participation of the ocular tissues, notably the uveal tract, in the general pathologic state, may furnish local mechanical and pathologic conditions which culminate in the inflammatory types of glaucoma and their striking symptoms-complex. Blindness already reached as the result of simple glaucoma does not, however,

necessarily avert the occurrence of acute glaucoma. Every surgeon must have found it necessary to do iridectomy or to remove the offending eye for the relief of pain in blind eyes with absolute glaucoma, it may have been many years after total loss of vision had been suffered.

The technic of iridectomy is important. There is probably no more difficult surgical procedure than iridectomy in the acute stage of inflammatory glaucoma. I am of the opinion that it should never be attempted except under profound general anesthesia. The hard eyeball, the steamy cornea, the shallow anterior chamber, the engorged, often inflamed iris, not infrequently form a group of conditions which make its correct and safe performance extremely difficult. The frequent failure to arrest the disease by the operation under these difficult conditions is, I am sure, because it has been found impossible to carry out an ideal technic. These difficulties in the acute inflammatory stage furnish a strong reason for operation before the occurrence of glaucoma fulminans, not only for the purpose of averting this catastrophy in patients under observation, but for the sufficient reason that in the non-inflammatory stage of the disease the operation can be performed with ease, precision and safety.

In no other operation on the eye is a faultless technic of more signal importance than in iridectomy for glaucoma if we hope to arrest the disease. This is always possible so long as we have an anterior chamber of approximately normal depth, a reacting iris and a patient quiet under general anesthesia.

I believe that, for a successful issue, the iridectomy should be peripheral, i. e., to the root of the iris, and that it should include one-sixth of its circumference.

I very much prefer the triangular bent keratome, the blade of which is approximately an equilateral triangle, the base and the cutting sides being equal. The blade should be entered through the corneal limbus at a point as nearly as possible on the same plane with the anterior surface of the root of the iris and carried forward parallel with it until the base of the knife engages in the wound. The slow and deliberate withdrawal of the knife is important, as it allows the gradual escape of the aqueous, prevents the sudden impact of the lens against the cornea, and often avoids the prolapse of the iris into the wound. The iris forceps can then be made to seize the iris at a selected point near the rim of the pupil, when it should be gently but firmly drawn out and carried strongly to one angle of the wound. The tension outward being steadily maintained, it can be severed at its base by successive snips with the scissors as the remaining uncut portion is carried toward the opposite angle of the wound. The severance being complete, the anterior chamber is apt to fill with blood; the angles of the wound, however, should be carefully freed from any entanglement of the pillars of the coloboma and the blood be allowed to escape by gentle but firm pressure made on the posterior lip of the wound by the flat side of an elastic tortoise shell spatula. If it is found impossible to free the anterior chamber of blood by this means no other effort should be made. The blood will usually be absorbed in from twelve to twenty-four hours and its presence is much less to be feared than the results of manipulation to secure its escape. It is probable that opacities of the capsule and lens cortex are more frequently caused by the efforts of the surgeon to free the anterior chamber from blood than from any direct injury to the lens by the point of the knife or by the forceps in grasping the iris.

In my experience the occurrence of cataract after iridectomy has been very rare except in cases in which the opacification of the lens had already begun before the operation. In one case of acute glaucoma with a very hard ball, a sudden escape of aqueous before the section was completed thrust the lens violently forward against the knife, rupturing the brittle anterior capsule and opacity followed, but in this case general anesthesia was prevented by the general condition of the patient.

DISCUSSION

ON PAPERS OF DRS. TENNEY AND RISLEY.

DR. H. V. WÜRDEMANN, Milwaukee, Wis., said that for the past year he had examined all cases of increased ocular tension that had come under his observation, and in a number of instances other members of the same family, by ocular transillumination, in hopes that this method would throw some light on the mechanism of glaucoma. Glaucoma is not a disease *per se;* it is a condition, the most pronounced symptom of which is excessive intraocular pressure. Primary anterior glaucoma may be due (*a*) to increased secretion; (*b*) to sclerosis of the vessels. Secondary glaucoma may arise from previous iritic disease causing obstruction of the filtration apparatus, or due to closure of the posterior chamber from iritic synechiæ. These conditions (*a* and *b*) are curable or alleviable by myotics or by the operations of iridectomy or sclerotomy.

Posterior glaucoma is due to obstruction of the vortical veins of the chorioid and diseased blood vessels, and is usually accompanied by general arteriosclerosis. Mixed types are due (*a*) to ocular tumors, which, from their growth and consequent intraocular pressure, produce obstruction of the anterior and posterior drainage apparatus; (*b*) so-called hemorrhagic glaucoma, usually due to subchorioidal hemorrhage which produces the same; for these two conditions enucleation is the only resort; (*c*) increased intraocular tension following injury to the lens which causes it to swell and press on the anterior filtration apparatus, obliterating the circumlental space and increasing the amount of albumin in the aqueous. Operations of iridectomy and removal of the lens are the usual recourse for this condition.

In the anterior types the diagnosis is assisted by transillumination. The diaphanoscope is best applied to the sclera at the outer canthus after application of 2 per cent. alypin or 5 per cent. cocain, although the light may be passed through the lids for superficial examination. The pupil is thereby lighted up and if the eye be looked at obliquely the opposite portion of the ciliary body will appear as a dark ring—the circumlental space as a clear ring at the root of the iris between the rounded margin of the lens and the ciliary processes. This is usually from 5 to 6 mm. wide. If the lens diameter be increased or if it be further forward than normal, or if the ciliary processes be thickened by congestion or if filled in by exudates, this space is encroached on and may be obliterated. The circumlental space is enlarged during accommodation.

Anatomic conditions, as a narrow circumlental space, predispose toward increased ocular tension, and individuals of families who are prone to anterior glaucoma will most of them be found to have a narrow circumlental space. Such cases do not have any increased tension except after the onset of conditions which cause glaucoma, but in them a small degree of swelling or congestion of the root of the iris or the ciliary processes tends to block up the space around the lens and thus interferes with drainage from the posterior to the anterior chamber and the filtration at the iridic angle. Traumatic cataract causes much the same conditions.

In posterior glaucoma, unless the anterior chamber becomes smaller—and this is by no means always the case in the chronic, simple non-inflammatory type—diaphanoscopy is negative. In glaucoma produced by intraocular tumors the shadow of the tumor may be seen, and if the anterior chamber be affected the conditions above described will also be readily demonstrated. Thus, the lighting up of the eye by diaphanoscopy gives us some idea of the mechanism of glaucoma and the anatomic conditions that predispose to this affection. We

clearly see that the anterior chamber is smaller, that the lens is further forward, and that the iridic angle and circumlental space are encroached on. Diaphanoscopy of the eye in glaucoma does not show anything new; it is, however, a valuable corroborative method of examination.

DR. JOHN E. WEEKS, New York City, said that, in considering the relation of chronic glaucoma to other forms of glaucoma with a view to its proper classification, it is necessary to inquire into the cause of glaucoma in general. This may be broadly stated to be a partial or complete blocking of the avenues for the escape of fluid from the interior of the eye, an excessive flow of fluid into the eye, or both. Glaucoma is very appropriately divided into two great classes, namely, primary and secondary, which, to obtain a comprehensive knowledge of the subject most readily, should be studied in the reserve order, as Priestley-Smith has done.

Primary glaucoma, one form of which concerns us, presents, as we all know, a number of clinical pictures which differ widely, but if these various clinical forms of glaucoma are analyzed, it will be found that there is no sharp dividing line between them; one blends into the other. The form of glaucoma that is not subject to congestion may be termed non-congestive primary chronic glaucoma in contradistinction to the congestive forms which may or may not be chronic. This distinction must not be drawn too closely, as the non-congestive form of primary glaucoma, may, and often does, become congestive, passing into subacute and even into acute glaucoma.

The research and experimental work of Priestley-Smith shows that the underlying cause of primary glaucoma in all of its phases is, in the vast majority of cases, obstruction to some degree of the filtration angle. In a few cases excessive secretion may overtax the normal avenues of escape and produce glaucoma.

No one who is informed doubts the efficacy of operative treatment in acute glaucoma. If we admit that chronic glaucoma and acute glaucoma are due to similar causes and that they differ in great part only in degree of severity, should we not expect that the same operative procedure that affords relief in the one would also afford relief in the other, provided that the procedure was applied at the proper time? The questions to be answered are: When is the proper time for operation, and what operation or operations should be performed? The changes affecting the filtration angle, gradually causing the root of the iris to encroach on and to become adherent to sclera and cornea at the iris angle, and the atrophic influence on the nervous elements of the retina and the optic nerve, reduce the possibility of arresting the disease either by sufficiently opening the filtration angle or by favorably influencing the atrophy of nervous elements, in direct proportion to the duration of the disease. Dr. Week's experience is in full accord with that of Dr. Risley, namely, that the results have been very satisfactory in the cases that were operated on early and very unsatisfactory in the cases operated on late.

What operations shall be performed? To be of value, iridectomy should be performed before vision is much impaired and while there is still sufficient space between the iris, sclera and cornea at the iris angle to permit the making of an incision in the iris angle. It should effect the removal of a portion of iris at its place of attachment to the ciliary body so that no stump remains. About one-sixth of the iris should be removed. If the iris is already adherent to the periphery of the cornea, iridectomy is not of value.

Dr. Weeks uses a Graefe knife in making the incision, except when the anterior chamber is fairly deep. The incision is made above; puncture and counterpuncture about 2 mm. from the margin of the cornea, so made that the incision will be about 5 mm. long internally. The Graefe knife is used because it can be made to enter the iris angle with more certainty than the keratome, especially when the anterior chamber is very shallow. If the anterior chamber is very shallow or the tension very high, a posterior scleral puncture is made. The iris usually bulges into the wound on completion of the section. It is seized near the pupillary margin, drawn toward the left, and the exposed iris radially incised at the extreme right. Traction is then made to separate the iris from its insertion for from 5 to 7 millimeters. The engaged part of the iris is then drawn to the right to free it from the wound and cut radially at the extreme left. The iris, if engaged, is then freed from the wound by means of the spatula.

Anterior sclerotomy is employed only as an adjuvant to iridectomy. Posterior sclerotomy is employed to facilitate the performance of iridectomy and in cases of simple chronic glaucoma which have become absolute to relieve tension. In the latter case the opening in the sclera is quite large and T- or L-shaped. Section of the cervical sympathetic or removal of the superior ganglion of the cervical sympathetic is resorted to only as a last measure.

DR. H. D. BRUNS, New Orleans, said that about 40 per cent. of those who come to his clinic are negroes, and the negro, while not more often affected by inflammatory glaucoma than the Caucasian, is more frequently the victim of non-inflammatory simple glaucoma. The negro is also liable to atrophy of the optic nerve, simple bluish-white atrophy with excavation, and it is sometimes difficult, if we do not insist on finding tension at all times, to decide whether we have slight excavation in an early case of chronic absolutely non-inflammatory glaucoma, or whether we have the beginning of atrophy with excavation. Dr. Bruns has come to rely very much on the shape of the field of vision. Those who do not practice in a country where negroes are numerous do not know, perhaps, that they never come in until they are really moribund, either as to their bodies or eyes. It is vain to talk of early operation, as they are never seen early. This has enabled him to satisfy himself beyond the peradventure of a doubt that when the disease is well established it is absolutely useless to operate. He agreed with those who say that it seems to accelerate the disease after it is fully established. Occasionally there is a chance to operate on the better eye. He has watched these cases for years and has never seen acute or subacute attacks in these negro patients.

He has been interested lately in a paper by LaGrange who believes that the incision in glaucoma facilitates the escape of fluid by the formation of a leaking scar and has recommended making the section so as to peak a little piece of sclera, then, by turning back the conjunctiva and clipping off this little peak, to enlarge the size of the cicatrix. LaGrange is a careful observer, and he writes of his experience in 20 cases, some of two years' standing, and finds that in this way he gets better results than with the simple incision.

DR. J. L. BORSCH, Philadelphia, said that since the illustrious von Graefe described glaucoma we have learned little more about the disease. Dr. Borsch once asked de Wecker what he thought glaucoma was due to, and he said that he did not know. If so great a master admits that he does not know, certainly a great many of the men who say they do can be mistaken.

Dr. Borsch has often compared the disease to a headache. He said that he considers it the symptom of an obscure condition of which we are as yet ignorant. Headache may be due to many things, as a brain tumor, intestinal irritation, or refractive error. He does not believe that an iridectomy does any more good than in sclerotomy (posterior and anterior combined) glaucoma. He did not think cutting the iris arrests the disease. He said that he had the honor of assisting de Wecker in the operation he did on Javal, who came to him with simple chronic glaucoma. He did a sclerotomy and maintained good vision for seventeen years. When he had another attack, de Wecker wanted to repeat the sclerotomy, but Javal wanted an iridectomy. He had the cervical ganglion removed, but the condition went on to complete blindnesss.

DR. M. WIENER, St. Louis, said that Vollert of Leipzig allows a piece of iris to be incarcerated in the wound. Dr. Henry L. Wolfner, many years ago, made the remark that he did not object if there was a slight prolapse of iris in the wound in iridectomy for glaucoma. He did not try to do it, but also did not try to replace it if it occurred. Three or four years ago he purposely started performing iridectomy by incarcerating an edge of iris in the wound, and claims to get permanent drainage in that way.

PROF. CARL HESS, Würzburg, Germany, said that for a patient with simple chronic glaucoma, one eye being blind and the other not, he tries irridectomy on the blind eye. If the result is encouraging he tells the patient that he is willing to try the operation on the good eye also, but that he can not

promise him any good effect; that if nothing is done he will surely be blind, but that the operation may possibly result in some vision. He has frequently seen the iridectomy made without fault and vision lost after a short time, and it seemed often that it was lost still more quickly than in the eye in which no operation was done.

DR. S. L. ZIEGLER, Philadelphia, agreed that an early operation is the best procedure. The suggestion of Dr. Wiener, in regard to the incarceration of the iris, reverts to some of the abandoned procedures of the early part of the last century. Incarceration of the iris would be very disastrous for most of us to contemplate on account of the possibility of sympathetic ophthalmia, for an incarcerated iris and a contracting wound may set up sympathetic trouble in the other eye at any time. If one wishes the wound to leak it would be preferable to turn a piece of the conjunctiva into the wound, but it would be better to make a posterior sclerotomy and then have a leaking of the posterior chamber, or rather, a governor to control the tension. He thought, therefore, it would be better to dress the iris back carefully, and see that there is nice healing of the wound with no inflammatory irritation afterward; otherwise there might still be another attack of glaucoma through plastic closure of the angle already freed. One of the objections to early iridectomy has been the possibility of cataract development afterward. Of course, it does develop in some of these cases, but generally it is the ordinary senile cataract, as glaucoma most frequently occurs in old patients. Another objection is that of varying astigmatism because of pressure on the corneal wound. It is, of course, possible that one may have every year a varying of the astigmatism requiring frequent refraction and change of glasses.

Posterior sclerotomy is an alternative operation that is often resorted to in certain circumstances. It is often done when the patient refuses the operation of iridectomy. He may be willing to risk the mider operation. Again, we may have such a shallow anterior chamber that it is dangerous to make the keratome incision. Of course, this is more easily performed with the narrow cataract knife, but even then there is some risk. A third class is that in which there is a possibility of hemorrhage into the eye. Dr. Ziegler said there is less danger of this accident after posterior sclerotomy than after iridectomy. He has performed posterior sclerotomy in a number of cases with good results. He has a patient in the Wills Eye Hospital, on whom he did a cataract operation recently, who had a posterior sclerotomy five years ago for fulminating glaucoma. He was able to reduce the tension at once, and, some weeks later, did iridectomy in both eyes. The iris of one eye was so rotten that it had to be taken out in small pieces. The other showed a very smooth coloboma. With proper glasses he has retained almost normal vision, but requiring frequent refraction, as the astigmatism changed. Posterior sclerotomy is best performed by plunging a Graefe knife into the eyeball midway between the extraocular muscles and about 6 mm. back of the limbus. Rotate the knife, press out a bead of vitreous, turn the knife at right angles and withdraw quickly, leaving a T-shaped incision.

DR. J. O. MCREYNOLDS, Dallas, Texas, said that Leibrich of Paris said it was the practice of von Graefe to make the incision downward and inward instead of upward as we do now, and Dr. Liebrich was not sure even now that there is any particular value to be ascribed to that situation of the incision. Dr. McReynolds spoke of this in order to be enlightened. He sometimes had a case like this: A patient comes completely blind in one eye with glaucoma, and very much diminished vision in the other eye. The question is, if he did not operate, how long would the patient retain the vision; if he did operate, is there much danger of causing sudden loss of vision? In such cases he had sometimes made a compromise which seems to have worked satisfactorily, based on the idea that it is the peripheral character of the iridectomy as much as the extent of the iridectomy that is the valuable feature, and he was convinced that a more narrow iridectomy is a safer procedure than a very broad one. The traumatism is greater in a broad iridectomy. After a narrow iridectomy, there is left a sufficient amount of iris to hold the lens in better position, and there is more iris tissue for the myotic to operate on if it is to be used after the operation. He had had just as good results with the narrow iridectomy as with the broad one. There is less deformity and less dazzling with the narrow iridectomy. If the operation must be repeated it can be done, for many iridectomies can be made at different times if the necessity should develop.

DR. HIRAM WOODS, Baltimore, said that some incidental conditions which ought to receive attention are the age of the patient, condition of arteries, kidneys, etc., and state of the lens. He narrated the case of a woman, 77 years of age, who came to find why she was "sometimes unable to see." With slight myopic correction her distant vision in each eye was 20/30. He could not get illumination with the ophthalmoscope, and a drop of euphthalmin (5 per cent.) was put in each eye and she was sent to the waiting room. In a half hour both pupils were dilated ad maximum, with increased tension in the right eye. Then he found opacities at the periphery in each lens, floating bodies in each vitreous, but the fundus in good shape. Special attention was paid to the arteries. There was no pain and a rough examination of the right field indicated contraction in the inferior nasal quadrant. Eserin was ordered. Two days elapsed before tension was normal in the right eye and the pupil was as small as that of the left. Central vision was again 20/30, but the field was contracted to nearly 30 degrees in the quadrant indicated. This was in May, 1906. Eserin was used during the summer while he was abroad. In the autumn she saw Dr. Risley, who, finding no increased tension but a cloudy lens, ordered a weak solution of homatropin. Later she returned to him with increased tension. He found further contraction of the field, but this was the only symptom of chronic glaucoma except the increase of tension by a mydriatic. Dr. Risley ordered eserin. When Dr. Woods saw her again in November, the field was contracted on both sides of the lower half, with a tongue-like scotoma shooting in toward the fovea, and reaching within 20 degrees of the latter, from the inferior nasal field. Central vision was as recorded, there was no pain, and the lens condition was unchanged. There was no bending of the vessels at the disc margin. The general condition was good. On the strength of Dr. Bull's observations, his own experience, and with Dr. Risley's approval, Dr. Woods did an iridectomy. The result was rapid and complete clouding of the lens, and development, after a fortnight, of acute glaucoma. There have been several attacks since. He told Dr. Bull about the case, and asked if the age and opacity of the lens should have kept him out of it. The reply was: "It would have kept me." Dr. Woods said it would keep him out of it another time. There are definite operative risks in these cases. Probably, with the slow progress of the disease, as regards central vision, at least, and no evidence of glaucoma in the left eye, a woman at the age of 77 would have preserved useful vision the balance of her life, in one if not in both eyes. Dr. Woods was sure he did not puncture the capsule during operation, yet the operative traumatism seems to have caused rapid swelling and opacification of the lens with subsequent acute glaucoma.

PROF. CARL HESS, Würzburg, Germany, said, concerning the extent of the iridectomy, that he has repeatedly made a small peripheral buttonhole and has had good success, so that he considers the extent of the iridic excision of no importance; a small iridectomy does just as well as a large one. He referred only to the simple cases, one eye blind and the other becoming worse; but a much more difficult question arises when both eyes retain good central vision and only the visual fields are contracted. Dr. Hess asked what American ophthalmologists do in these cases. Before he crossed the ocean he saw a woman of 36 who had been operated on—an iridectomy for chronic glaucoma. In one eye the lens had been injured and a complete cataract had been afterward extracted. When he saw her the anterior chamber was deep, the optic disc white, with excavation, but central vision nearly normal. In the other eye the lens was transparent, the fields a little smaller than normal, and normal central vision. He refused to operate as long as vision was nearly normal. He has used eserin for weeks or months and often that is sufficient to keep the vision normal. In the case mentioned the attendant wished him to do the operation and insisted that every six months for some years past the field had been found to be smaller and

smaller, but Dr. Hess declined to operate while the vision continued to be almost normal.

DR. JOHN A. TENNEY, Boston, agreed with Dr. Würdemann's statement that there is posterior glaucoma. Intraocular tumors may close the circumlental zone; but Dr. Tenney was speaking of ordinary chronic glaucoma. Several years ago a certain patient had traumatic cataract in one eye. It was evidently a soft cataract, very white, and the iris was paralyzed so that only a slight rim remained. Two years ago, Dr. Tenney removed it by needling. Since his paper was sent in this patient came to him, and had hardly noticed that the vision had nearly gone out of that eye. Dr. Tenney noted the increased tension and suggested that withdrawal of the aqueous might help the vision. It did not have that effect. He tested the fluid and found it loaded with albumin. Here was a case of chronic glaucoma going on so insidiously that the patient hardly knew that it existed, and the aqueous was loaded with albumin. That confirmed Dr. Tenney's opinion that chronic glaucoma may be caused by closure of the filtration angle by an excessive amount ot albumin in the anterior chamber.

DR. S. D. RISLEY, Philadelphia, said that he had never approached a subject, before this Section or elsewhere, with more perturbation than this one. He purposely avoided, in the paper, any allusion to the etiology of glaucoma, or to the reasons for doing what he had suggested, other than those pointed out in the clinical histories related. He declared that a careful reading of the text of the paper, which was written with much care and forethought, on a subject which has agitated his mind for many years, will show that every inquiry raised in the discussion is thoughtfully answered in the clinical pictures supplied. He started out primarily to give a careful analytical study of the 140 cases on which the paper was based. Such study was made, but the analyses were not given in the paper.

He has always used the bent keratome, the character of which is described in the paper. He agreed with Dr. Bruns regarding the tendency of the colored race to chronic simple glaucoma, but his experience does not agree with Dr. Bruns as to its never passing into the inflammatory type. He had repeatedly seen the chronic non-inflammatory glaucoma present in one eye and the inflammatory type of older date present in the other. In that respect he did not think that the colored race differs materially from the white. One of the contentions in his paper is that these forms of the disease are one and that, if the patients live long enough, even if blindness has come to pass during the non-inflammatory stage of the disease, it will sooner or later pass into the congestive, more or less pronounced inflammatory type.

He had many times been compelled to enucleate eyes, long blind but painless, for a more or less sudden onset of acute fulminating glaucoma. He said that he appreciated very highly the conservatism of Dr. Hess' advice, and emphasized the necessity for the greatest conservatism in the management of glaucoma simplex. A careful reading of the histories given in his paper, he said, would show that he had again and again to operate on one blind eye presenting a moderately congestive form of glaucoma which had, nevertheless, gone on for many months, in some cases for years, without inflammatory exacerbations, but which finally compelled the patients to seek relief from the intolerable pain of the final inflammatory stage, while the fellow-eye still presented the characteristic non-inflammatory type of the disease, with the contracting field of vision, doubtful tension and cupping of the nerve.

Removal of Piece of Glass from the Pericardium.—A robust young man was stabbed in the heart with a long, pointed piece of window glass. The threatening symptoms of hemo-pneumothorax the next day compelled surgical interference, and Ortiz de la Torre found and successfully removed the pointed tip of the glass, which had broken off in the wound. It measured 1½ by ¾ inches, and was found in the pericardium, the tip implanted in the wall of the auricle, rising and falling with the latter. The pulse tracings and other details of the case and operation are given in the *Siglo Medico*, liv, page 338, 1907. At date of writing, a week later, the patient was in good condition, pulse 86, temperature normal and respiration tranquil. The wound was sutured without drainage.

THE PREVENTIVE TREATMENT OF TRANSFERRED OPHTHALMITIS.

(SO-CALLED SYMPATHETIC OPHTHALMIA.)*

CHARLES A. OLIVER, A.M., M.D.
PHILADELPHIA.

For many months I have been engaged in the collation of the histories of all of the recorded cases of every form of so-termed "sympathetic disease"[1] that had been treated in the dispensary and indoor services of Wills Hospital in Philadelphia since its opening, a period embracing more than seventy years.

During these studies—in which I received excellent help from three of my personal assistants[2]—I soon realized that in spite of a vast yearly increase of the work done at the hospital and a broader and earlier recognition of the condition, there was a decided lessening in the number of cases, and a much less degree of fatality among those which had been treated than in former years. These findings seemed so important that I instantly chose the preventive phase of the disease as worthy to be the subject of this paper.

The many desultory, and at times uncertain, cases of the first thirty-five years' work of the hospital were grouped together, while the latter half of this portion of the hospital's work, which had been systematically arranged into annual groups, was divided into periods of time similar to those which I had used in a study of several thousand cases in which senile cataract was extracted.

Critical inquiry into the detailed histories of the cases elicited many points of value. For example, it was found[3] that, in spite of a vast increase of the types of cases which are ordinarily supposed to be provocative of the condition (some 62 per cent.), the proportionate number of cases seen was actually reduced nearly 80 per cent. within the past ten years. This is a remarkable improvement and one which is worthy of special record, when it is considered how long the institution has existed, that it is situated in the midst of a large industrial and commercial center, that it is near to an immense mining territory and agricultural district, and has always been favorably known—reasons, which, for many years past, have been the means of bringing from ten to fifteen thousand new eye cases annually to its doors.

Employing the title "preventive treatment" as it should be employed, i. e., to express both the indirect and the direct preventive measures for lessening the chances of occurrence of the disease, I here offer some of them in brief detail under their two respective headings.

*Read in the Section on Ophthalmology of the American Medical Association at the Fifty-eighth Annual Session, held at Atlantic City, June, 1907.

1. As I have elsewhere stated, for several years past I have taught my classes and private students that so-called "sympathetic irritation" and "sympathetic ophthalmia" are simply different stages of a condition which is preferably termed "transferred ophthalmitis." I believe that the expression "sympathetic," as ordinarily understood in this connection, has no significance whatever, and I am certain that the term "irritation" is just as false: it must be conceded also that the word "ophthalmia" should not be applied to any form of inflammation of the interior of the eyeball. The word "transferred" is correct, no matter what the process may be, and the generic term "ophthalmitis" is both adequate and comprehensive.

2. Drs. S. Rush Ketcham, Albert J. Britt, and Ida Louise Haverstick.

3. As noted in the "Discussion on Sympathetic Ophthalmia," before the 1906 (seventy-fourth) annual meeting of the British Medical Association, Toronto, Ontario.

INDIRECT CAUSES.

1. More improved and better constructed machinery, which, as a rule, has contrivances for the rapid and the safe removal of extraneous and useless débris, etc.

2. More carefully arranged, more sanitarily built, and more adequately illuminated factories, mills, shops, etc., than formerly.

3. A broader compulsory employment of personal protectives by the workmen during their occupations (as was found by comparison and contrast of the conditions prevailing at the different places from which the patients came).

4. More prompt search for and amelioration of the original disturbing conditions. Study of the cases showed that for the past ten years the time elapsing between the onset and the first examination and treatment had greatly lessened; this in great measure having been the result of the present realization of the value of speedy relief, and the increased ease of railway communication between distant centers and the hospital.

5. Better personal condition of the patient. This was so pronounced that in many cases prognoses could be determined in great measure after a cursory inspection of the general appearance of health and cleanliness of the patient; this in addition to the race, the nationality, the sex and the age—all of which serve as greater prognostic factors than is ordinarily believed.

6. A better arrangement on the part of the hospital for immediate attention to first aid applications and remedial measures to every case that is brought to the institution. For the past six years there has been an efficient medical officer constantly on hand to attend promptly to any case applying, while two or more of the surgical staff are nearly always to be found within a few minutes' time for personal advice and action.

7. A higher grade of skill on the part of those in charge of the cases than formerly. This has been obtained through a vast increase, and now almost constant repetition, of similarly affected cases.

A better equipment, always available, of all of the modern instruments and appliances known, thus allowing more or less positive results for good to be obtained within the briefest periods of time after the admission of the patient.

DIRECT CAUSES.

9. An increased certainty in intelligent action by the early employment, if necessary, of one of the most exact methods of *x*-ray studies in the country.

10. The prompt removal, whenever possible, of any foreign body from the interior of the eyeball by the methods which have been found to be the latest and best adapted for each special case.

11. A greater tendency toward the early removal of shattered and useless eyeballs of dangerous types by the simplest and the least complicated methods of operative procedure.

12. A better preparation of the patient for—as nearly as may be possible—aseptic operative measures or special remedial treatment in the wards of the hospital, every case being subjected to the best and the least disturbing cleansing processes for both skin and mucous membrane, each case being isolated, as far as practicable, by being placed in bed, and every affected eye being promptly treated for prevention or lessening of reaction and reduction of inflammation.

13. A more prolonged continuance of controlled therapy than formerly, thus ensuring an increased probability for permanent quiet and a greater chance of escape from subsequent disturbance.

14. Better facilities for guard over the cases for long periods of time, each patient always being personally requested and whenever possible required, through his employer, to report at fixed intervals for careful restudy of the remaining conditions.

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DISCUSSION.

DR. C. R. HOLMES, Cincinnati, said that so far there has been nothing adduced to prove the theory that sympathetic ophthalmia is due to an infection, and that there is still a wide difference of opinion as to whether the infection travels by way of the intraocular blood vessels, or along the nerves, optic or ciliary, or even the far-fetched theory of infection through the subcutaneous veins crossing the bridge of the nose (by Motais). The results of experiments on animals have failed to clear up the mystery of this disease. There is no guide to treatment, but the clinical picture of a plastic nonsuppurative inflammation, alike in the injured and secondarily involved eye—and hence it has been declared that the causative agent can not belong to the pus-forming bacteria, as was once supposed. At the time of or shortly after the injury it is impossible to tell whether, if inflammation should develop, it will be a purulent involvement or a primary plastic fibrinous inflammation. Dr. Holmes believes that the per cent. of sympathetic ophthalmia has decreased so enormously because the theory of infection is now recognized by all physicians and pretty thoroughly disseminated among the laity, and, above all, because a large number of the general practitioners have learned to keep their hands and infected instruments and applications away from the freshly injured eye, but promptly cover it with a clean protective bandage and hurry the patient to an oculist. Dr. Holmes said that, in severely injured globes, when there is no doubt that vision is permanently lost, one should not be influenced by the appeals of the patient or his family to save the globe and thereby to invite future trouble—but should promptly remove the eye, or perform evisceration, rather than to take any chances on the possibility of transferred ophthalmitis developing in the future. Even if harmless, these eyes seldom retain their spherical form, and shrink with extensive changes of the cornea and iris and become far more unsightly than a well-fitted artificial eye.

DR. WILLIAM ZENTMAYER, Philadelphia, said that Dr. Oliver mentioned, among the direct causes for the lessening of cases of sympathetic inflammation, "the prompt removal, whenever possible, of any foreign body from the interior of the eyeball . . . ." Dr. Zentmayer said that, while this is without doubt true, yet it is his belief that in some instances this has been the direct cause of sympathetic inflammation. Some times in the removal of magnetic foreign bodies from the interior of the eye the amount of trauma resulting is so great that better judgment would be to perform immediate enucleation, but the success in extracting the foreign body makes the patient less willing to accept such counsel and makes the physician more indulgent to his pleading and as a result one sees patients with sightless irritable eyes which are a constant menace to the fellow eye.

DR. JOHN A. DONOVAN, Butte, Mont., said that most eyes are lost by meddlesome ophthalmology. Clean the eye and keep it clean without producing irritation. Do not operate on an injured eye until sure it should be operated on. Do not operate on an injured eye until sure it has attained the best possible condition likely to be obtained. Then do the operation which will produce the best results. Dr. Donovan believes that sympathetic ophthalmia should and will become an obsolete disease if these suggestions are carried out.

DR. L. R. BORSCH, Philadelphia, said that the injection of large quantities of bichlorid of mercury, 1 to 2,000, into the conjunctiva will sometimes prevent sympathetic ophthalmia. He saw a patient who had been injured by a piece of stone penetrating his eye and making a large wound. The eye had become highly inflamed and the vision was reduced to light perception. The man was an Italian and had seen several ocu-

lists, who advised him to have the eye removed, but he refused. Although Dr. Borsch advised immediate removal the patient absolutely refused, and Dr. Borsch was compelled to treat him. He removed the foreign body, disengaged the whole of the conjunctiva and simply turned it completely around so that the wound was covered by healthy conjunctiva. He injected a whole syringe full of bichlorid solution. The patient suffered greatly for 24 hours, but six months ago he had absolutely normal vision. He had irritation in the other eye at the time which subsided. Dr. Borsch attributes the good result to the injection of the mercury. Such an experience, he said, should not, of course, make one temporize with a case unless compelled to.

DR. ALBERT E. BULSON, JR., Fort Wayne, Ind., said that in deciding the question of enucleation in these cases of injury in which there is a possibility of sympathetic trouble, one sometimes errs on the wrong side by enucleating too early, and in the endeavor to prevent the possibility of sympathetic inflammation may take out an eye which otherwise might be saved. The prevailing opinion among general physicians is that an eye in which a foreign body has entered is one for enucleation whether the foreign body has been retained in the eye or not. He recently had an experience which leads him to object to the methods pursued by some ophthalmologists of enucleating these eyes to substantiate the opinion of the family physician or under the mistaken idea of the possibility of sympathetic inflammation. A patient was brought to him with a perforating injury in the ciliary region in which there was a very mild infective process. He saw the patient a few hours after injury and advised local treatment for a period of a week or ten days, telling the family physician that during that time it would be possible to foretell the fate of the eye, and that there was no danger in pursuing this policy, as no case of sympathetic inflammation had ever been known to occur within two weeks following the injury to the fellow-eye, and that if, at the end of a week or ten days, or even before, there should develop dangerous symptoms, enucleation should be performed at once. Much to Dr. Bulson's surprise, a highly respected member of this Section in an adjoining city coincided with the family physician as to the necessity for prompt enucleation, and the operation was performed within four days subsequent to the injury. Later he learned that the condition of the eye at the time of enucleation was no worse than when he saw it, and at that time there was useful vision. In his judgment the patient was not given an opportunity of knowing whether or not the eye could have been saved or not, and an eye with useful vision was enucleated fully ten days earlier than any case of sympathetic inflammation has ever been known to occur following such an injury. Such methods may be called conservative surgery, but in Dr. Bulson's judgment it is radical surgery and the patient has to suffer the consequences. It requires a great deal of judgment to handle these cases properly, but there are certain established rules which physicians are always warranted in following, and one of them is that unless an eye has been injured beyond all reasonable hope of saving either vision or eyeball, the operator is perfectly safe in postponing removal of the eyeball until at least ten days to two weeks has been given to an attempt to save either sight or eyeball.

DR. CHARLES A. OLIVER, Philadelphia, agreed with Dr. Holmes in regard to infection; also in reference to shattered and dangerous eyeballs. He always removes them. In regard to the avoidance of prompt operative treatment of injured eyeballs whenever necessary, for fear of provoking "sympathetic disease," through additional traumatism, he deems it unwise and, at times, reprehensible. He agreed with Dr. Randolph that those eyeballs which have lowered tension are the ones from which disease is most likely to be transferred.

Unapplauded Heroes.—It is a strange thing that the applause of men greets only those who fight with men. They who battle with the enemies of man, with disease, with accident, with unknown forces, and unknown seas and lands, these men must fight, and, if necessary, die almost unnoticed by their fellows.—*Lancet*, London.

FURTHER OBSERVATIONS ON RETINITIS PUNCTATA.*

H. GRADLE, M.D.
CHICAGO.

On the basis of ten personal observations, five cases reported to me by colleagues,[1] and a review of the literature, I presented to the International Congress at Lisbon in 1906 a paper on the Punctate Forms of Retinitis.[2] In this study I came to the conclusion that the term had been and could be applied to several different types of disease, which had in common merely the occurrence of white dots in the fundus but varied in significance and clinical history. These conclusions I can confirm and extend by a further study of some of my patients.

While a pronounced retinitis punctata albescens, as the term is used by Mooren and most of the writers, is a rare disease, the appearance of discrete and usually not numerous white or yellowish-white dots, apparently situated in the retina, is not uncommon. When these white dots are numerous, counting up into the hundreds, the ophthalmoscopic picture is a striking one. When they are few in number they are usually faint and not readily seen through a narrow pupil. They range in size from about one-half to one diameter of a retinal artery of the second order, are round or rounded, well defined even if faint, and are usually not close enough to any vessel to show how deeply they are situated. The white dots occur in both eyes, although often the two eyes are not involved alike. They are in many instances transient, though of long duration, and may hence be considered minute infiltrations. Perhaps they may be of a degenerative nature when permanent. The cases observed by myself or reported in literature can be divided into the following types of disease:

SIMPLE PUNCTATE RETINITIS.

I shall reserve this name for the cases which present retinal dots without other complications at the beginning or during the duration of the disease. In this form the dots are not numerous, a few to a dozen, rarely beyond a few dozen, more or less near the margins of the optic disk, to some extent spreading toward the macula, and as a rule one eye more involved than the other. The sight may be normal or slightly reduced, especially in the more involved eye. With normal sight there may be irritability or asthenopia. The latter is sometimes relieved by appropriate correction of an existing ametropia, which had previously not annoyed the patient. In most of the cases seen or collected by me rest of the eyes and hygienic management have caused the dots to disappear in the course of months.

Possibly the cases described by M. Gunn,[3] in which such dots of minute size were found without symptoms belong to this group. Gunn found this anomaly in seven members of one family. The etiology is not clear in any of the cases. The case which I have had the best opportunity of studying is worth quoting from the Transactions of the Lisbon Congress, especially as the patient suffered a relapse since my previous report.

CASE 1.—(Case 4 in the Lisbon Transactions.) *Patient.*—Mr. L., aged 36, of good health.

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*Read in the Section on Ophthalmology of the American Medical Association at the Fifty-eighth Annual Session, held at Atlantic City, June, 1907.

1. I wish to thank Drs. Hotz, Faith and Wescott for their courtesy.

2. Full abstracts of this paper have appeared in the Ophth. Rec., October, 1906, and Arch. of Ophth., November, 1906.

3. Trans. Ophth. Soc. U. K., vol. iii.

History.—Patient had a recurrent inflammation of left frontal sinus. Incidentally he mentioned that for two years past he had not seen as well with his right eye as with his left.

Examination—R. E. V. = 20/50. Field normal. No scotoma. L. E. V. = 20/20. In right eye fine whitish dots scattered all over the central part of fundus, about ten in the macular area. In L. E. about six similar dots near the temporal side of disk. No other lesion. Under potassium iodid in large doses the sight of R. E. rose to 20/40 within two weeks. After six weeks there were apparently fewer spots in the macular area of R. E. Six months later sight of R. E. normal. At that time as well as some sixteen months subsequently no dots could be found.

Subsequent History.—Mr. L. was seen repeatedly during the next year on account of transient left supraorbital neuralgia due to purulent inflammation of either the frontal sinus or the anterior ethmoid cells. The discharge as well as the pain yielded each time quickly to intranasal treatment. About 2½ years after the first examination he complained again of poor sight in the right eye, and admitted that the left was not perfect. V. was found = 20/40 + in each eye, the R. E. being subjectively more dim. A fresh crop of white dots had appeared in the R. E., perhaps some 30 in number, at the temporal edge of the disk and again in the macular region The left eye showed only three dots at the nasal side of the disk and a few scattered throughout the central area. No other ocular lesions. No scotoma. He had a slight purulent discharge from both sides of the nose, apparently from the anterior ethmoid cells. Iodid had no effect this time. The dots in both eyes increased moderately in number. Those near the papilla in R. E. enlarged in size so that several became distinctly elongated in shape. V. diminished in both eyes to 20/50, varying somewhat on different days. As iodid seemed to increase the nasal discharge it was stopped and only nasal irrigation and sprays were employed. About the fifth week decided subjective and later on objective improvement began. Still later the nasal discharge became reduced and intermittent, and finally ceased. At one time the sight of the left eye was not as clear as that of the right, although the spots were always more pronounced in the right. After four months vision became normal and the dots reduced in number were fading.

PUNCTATE RETINITIS FOLLOWING OPTIC NEURITIS.

Frost[4] has pointed out that dull white dots occur occasionally in the retina near the disk in the course of a neuritis. This I have observed repeatedly, most notably in an instance of unilateral optic neuritis of moderate severity in an adult in whom a small number of white dots persisted for some months without interfering with ultimate recovery. In my case books I have not noted these cases as retinitis punctata. The striking picture of retinitis punctata may, however, be brought on in the course of an optic neuritis, as observed by Dr. Faith in two instances kindly placed at my disposal by him.

CASE 2 (Dr. Faith).—*Patient.*—Boy, aged 15, had complained for two weeks of headache and failure of sight. V. = 1/8. Pronounced optic neuritis without hemorrhage. Slight fever. Urine normal. Under treatment (sweats, iodid of mercury) sight improved and a central scotoma became demonstrable. After two months V. = 6/9. As the neuritis disappeared numerous white yellowish pinpoint dots appeared around the disks verging toward the macula. In the course of a year they had almost disappeared with ultimate normal sight.

CASE 3 (Dr. Faith).—*Patient.*—Girl, aged 15, complained of headache and blurred sight. V., which had formerly been 6/5, was reduced to 6/9 in R. E. and 6/7.5 in L. E. Edges of disc blurred and vessels tortuous. Numerous small bright specks surrounding the discs. Moderate anemia.

Treatment.—Iron and aresnic were given and in two months vision rose to 6/5 and the fundus anomalies disappeared except the dots. The blood count became normal. A year later no anomaly was found, except a few faint dots below the disc in the R. E.

4. Fundus Oculi, 1896, p. 199.

I wish to emphasize this relationship of retinitis punctata to optic neuritis, as I believe it furnishes the clue to the pathology of the larger number of instances reported in literature shortly after Mooren's first use of the name.

PUNCTATE RETINITIS AS PART OF GENERAL RETINAL DISEASE.

In the cases reported by Hirschberg,[5] Landesberg,[6] Burnett[7] and M. Standish[8] there were retinal exudates, vascular changes and hemorrhages in the earlier part of the disease. The patient of Standish showed especially well the evolution of the disease, viz., gradual failure of vision to 1/5, diffuse haze of the retina, becoming complicated by retinal exudate, and infiltration around the disk with tortuous vessels, whereupon a few retinal dots began to appear. On the course of a week's treatment all lesions disappeared except the dots, which continued to increase while sight became normal. The disease was almost always bilateral but not equally extensive in both eyes. All the patients had decided impairment of sight, usually in the form of a well-marked central scotoma. Some recovered completely, others only partially, with some optic atrophy. These latter incidents, the typical scotoma not explained by localized retinal disease and the possibility of later atrophy, suggest strongly that a retrobulbar neuritis was present, probably as the most important of all the lesions. The presence of the white dots does not account for the scotoma; in fact, with a retina studded with these minute infiltrates vision may become almost perfect.

ATYPICAL FORMS OF RETINITIS ALBUMINURICA.

Two of my observations (Cases 10 and 11 in the Lisbon Transactions) could be interpreted as atypical forms of retinitis albuminurica due to pronounced kidney disease. In both the retina showed as the principal lesion the characteristic punctate infiltrates. Unfortunately, both patients did not stay permanently under observation.

PUNCTATE RETINITIS WITH INVOLVEMENT OF CHORIOID.

In some instances which can be called punctate retinitis there is some involvement of the chorioid. I can not say, however, whether this is primary or secondary. Dr. Hotz gave me the reports of two cases of transient white punctate infiltrates of the fundus with practically normal vision ending in recovery, which he interpreted as chorioidal disease, because in one of them there were fine filaments floating in the vitreous, while in the other chorioidal hyperemia during the course of the disease led finally to irregular mottling of the chorioid pigmentation. In one of my own observations of retinitis punctata, apparently due to kidney disease with diffuse retinal cloudiness and central scotoma, the sight steadily failed with the development of a diffuse opacity of the vitreous. I have also seen a case of a localized patch of areolar chorioiditis in which the white dots characteristic of punctate retinitis were scattered throughout the central area of the fundus.

ATYPICAL RETINITIS PIGMENTOSA.

The name retinitis punctata is at present, however, mostly applied to an entirely different form of disease which is probably an atypical variety of retinitis pigmentosa. These patients complain of more or less night-

5. Centrlbl. f. A., 1882, 330.
6. Centrbl. f. A., 1883, 261.
7. Arch. of Ophth., 1882, xxii, 22.
8. Ophth. Rev., September, 1893.

blindness, usually since youth. The central vision is sometimes normal, sometimes reduced. In some the visual field is restricted. There is often, but not always, consanguinity in the parentage. Several instances occurred in brothers and sisters. The greater part of the fundus, but not the periphery, is studded with minute dull white dots, while the macula is nearly free when central sight is still good. In many of the cases pigment figures were seen in the periphery of the fundus sometimes described as not characteristic of retinitis pigmentosa. In cases with reduced sight the nerve appeared moderately pale. It has been repeatedly observed that the disease can remain stationary for many years and that it progresses rapidly.

Cases of this kind have been reported by Gayet,[9] Dor[10] and Nettleship.[11] Fuchs[12] subsequently interpreted these cases as atypical retinitis pigmentosa. Further reports have since appeared by Liebrecht,[13] by Griffith,[14] also by Tr. Collins and Swanzy,[14] and Wuestefeld.[15] The latest of the same kind are reported by Wicherkiewicz[16] and by Takayasu,[17] who saw two instances in Japan.

CASE 4.—*Patient.*—Miss L., aged 29, anemic, complained of headaches, especially in the afternoons, and of fatigue of the eyes. Did not see well at night.

Examination.—V. R. E. = 20/20; L. E. = 20/40, improved to 20/30 by Cyl. + 1, axis 135. Homatropin showed in addition H. = 1 D. in both eyes. Nerves and vessels normal. Near but not quite at the periphery of the fundus was a zone showing pigment figures in the form of delicate branching threads. In the L. E. there were two dozen white specks in the more central part and several areas of exceedingly fine white dots. A fainter dotting was also seen in the R. E. The headaches were permanently relieved by appropriate glasses. No change after one year.

Subsequent History.—Eight years later I saw the patient again. Her night-blindness was a trifle more troublesome, but her central vision was as good as formerly. The fields were still perfect. The ophthalmoscope showed no certain change in the appearance of the retinal pigmentation. The white dots, however, could no longer be found.

The case can not be considered ordinary retinitis pigmentosa on account of the atypical form of pigmentation as well as the persistence of practically normal vision for eight years in a patient now 37 years of age. As far as I know this is the first instance of this form of retinitis punctata watched during such a long time, and also the first in which the white dots have ultimately been found to disappear.

DISCUSSION.

DR. M. WIENER, St. Louis, said he has had little experience with the punctate retinitis, described by Dr. Gradle as a retinal infiltration which disappears and sometimes reappears to fade away again, leaving no trace or scar. He has seen a punctate infiltration of the retina which he would term a senile form, in which the swelling would subside and leave little sharply outlined dots, as though they had been punched out with a conductor's punch. These may, or may not, affect the visual acuity according to what degree the macula be affected. Where the spots occur around the disc or between the disc and the macula, which is the most frequent site, we may have no disturbance of vision. But should they lie in the macula we have a marked reduction of the visual acuity. Dr. Wiener has examined the fundus of patients with no other trouble than their presbyopia and found these atrophic spots, the patient unconscious of having had any inflammatory trouble in the retina. Then again, as Dr. Gradle pointed out, the retinal dots may be associated with some other trouble, as optic neuritis or with diffuse retinitis. He said he believed that in a great many cases the retina is only secondarily affected, the trouble being primarily in the chorioid; the infiltration occurring almost at the same time, or a little later, in the retina. The atypical albuminuric form he has not seen.

DR. R. S. LAMB, Washington, D. C., called attention to what he believes to be the foundation cause of retinitis punctata, the condition of the arteries. He asked if Dr. Gradle takes the blood pressure in any of these cases. He said he should think that the retina would be the first to be affected, rather than the chorioid, because of the size of the vessels.

DR. H. GRADLE, Chicago, said that in the two instances which seemed atypical forms of albuminuric retinitis there were probably vascular changes. In none of the others was there any reason to suspect this.

9. Arch. d' Ophth., iii, 386.
10. Id., 481.
11. Trans. Ophth. Soc., U. K., iv, 162; vii, 301; viii, 163.
12. Arch. f. Ophth., 39, iii, 65; and Arch. of Ophth., 1888, xxvii, 484.
13. Klin. Monatsb. f. A., June, 1895.
14. Trans. Ophth. Soc., U. K., 1897.
15. Ztschr. f. A., v, 2.
16. Trans. of Lisbon Congress.
17. von Graefe's A. f. Ophth., lxiii, 281.

SURGERY OF TUMORS OF THE BLADDER FROM A MODERN ASPECT.

G. KOLISCHER, M.D., AND L. E. SCHMIDT, M.D.
CHICAGO.

Operative interference in tumors of the bladder is not at the present time conducted in a uniform manner, nor is it based on any generally accepted rules, as is the case in other domains of surgery. Each operator has notions and fancies of his own and operates accordingly, employing in many instances methods which, if applied in other branches of akiurgy, would bring ridicule on his head. Therefore, the possibility of approaching this subject in a more orderly and systematic manner, as well as the great scientific advantage to be derived therefrom, has induced us to attempt, by taking into consideration the work that we had observed in various genito-urinary clinics, by availing ourselves of the pertinent literature, and by analyzing our own experiences, to establish certain basic principles on which, as a foundation, might eventually be built up a rational and consistent surgery of tumors of the bladder.

From the very first one essential principle becomes apparent: benign tumors should be approached from the inside, malignant tumors from the outside of the bladder. The intrinsic qualities of a benign tumor are such that it is manifestly sufficient if its mucosa, submucosa and pedicle alone be removed; it is not necessary in operating on such a tumor to go through the entire thickness of the bladder wall and resect all its layers.

CYSTOSCOPE OR INCISION?

In approaching benign tumors from the inside of the bladder we have at our command two methods: one, the endovesical, through an operative cystoscope; the other through an incision in the viscus, which renders accessible the implantation of the growth. In the endovesical method, after proper dilatation of the bladder, the operative cystoscope is introduced, the tumor is focused and the galvanocaustic snare is developed into a loop within the bladder. Then, in case the tumor is not too large, the loop is passed over the growth and down to its base and constricted until it fits snugly around the pedicle. The electric current is now turned on and the interpolated resistance is diminished until little bubbles appear around the loop, after which the pedicle is seared through by slowly constricting the loop. Then, if deemed necessary, the galvanocaustic loop-carrier is withdrawn and a straight, solid galvanocautery is in-

serted in its place, by means of which the stump of the pedicle is again cauterized.

The severed tumor either is picked up by forceps introduced through the cystoscope or, after removal of the cystoscope, is pumped out through an evacuator; if very small it may be left to be expelled by the urinary stream. The suggestion of using a steel wire snare, instead of the incandescent platino-iridium loop, to crush the tumor and thus prevent subsequent hemorrhage (B. Klose) seems to have been based largely on theoretical speculation, for actual experience has not justified its claims. In case the tumor is rather large it may be removed piecemeal by means of the galvanocaustic snare; when the pedicle is reached it is seared through by means of the loop or burned down with the solid galvanocautery.

Although the instruments almost exclusively used by the operators who are doing endovesical work are those with indirect view, we desire to state that, in our opinion, which is based on manikin practice and experience on the living subject, it is of decided advantage to use the cystoscope of direct view in operations of this character. As a matter of fact, the cautery of Nitze's operative cystoscope almost entirely obstructs the view of the point of its application; this defect has led to the suggestion of using a fenestrated galvanocautery (B. Klose). With the instrument of direct view it is much easier to pass the wire loop over the tumor and down to the insertion of the pedicle, first, because the loop and the tumor are in the direct line of view, and, second, because of the short distance between the window, the loop-carrier and the growth. The same reasoning holds good in the use of the solid galvanocautery. It must be admitted, however, that in operating endovesically on a tumor located in the vertex of the bladder the cystoscope of direct view can hardly be used; in such cases, which, however, are extremely rare, the so-called long wire-loop of Nitze's operative cystoscope should be employed. Judging from our experience on the manikin, it would seem as though many of the disadvantages observed in the operative cystoscope of Nitze might be avoided by using an instrument of indirect view, constructed after the pattern devised by Casper.

There are some writers who object on principle to all endovesical operations so far as tumors of the bladder are concerned, basing their objections on the possibility of subsequent hemorrhage, the less extensive excision of the base of the tumor, and their belief that, since such an interference calls for specialized study and skill, it will never become a routine surgical procedure (Cathelin). Technical objections coming thus from men who have had no personal experience with the endovesical methods have no weight. The theoretical objections as to the insufficient extensiveness of the operation are refuted by the statistics of those who are actually doing endovesical work (Nitze, Wenrich, Klose, Casper, Keersmaecker). Among these Nitze stands pre-eminent; there are no statistics which compare even approximately with the splendid results obtained by this master and his pupils. In the light of such work even those who are most pessimistic as to the outcome of operations on bladder tumors, however radical the excision may be, are beginning to realize more and more the necessity of employing the endovesical procedure (Keydel).

EXSECTION.

The other method for the removal of the benign tumor involves its bloody execution after the bladder has been opened by an incision. The only route through which such an operation should be approached is the suprapubic, for in this way free access is obtained to all parts of the bladder. We desire to submit, as the fundamental principle of this operation, that it be conducted with one object always in view, i. e., the complete closure of the bladder after the tumor is extirpated. In order, however, that primary union and uneventful recovery ensue, it is of paramount importance to bear certain details carefully in mind, remembering always that a liberal incision through the anterior wall of the bladder is requisite for smooth, clean surgical work inside the viscus; nowhere is button-hole surgery more out of place than in bladder work.

The anterior aspect of the bladder should, therefore, be freely exposed in order to gain space for the generous incision; perivesical fat and the peritoneal duplication are to be stripped off until a sufficiently large area of the bladder wall is exposed. The bladder wall is caught by a few sutures, which are used later on as guy ropes. The bladder is incised between these sutures and all squirting blood vessels are ligated. The tumor and its base are now brought into full view and made easily accessible either by catching the base of the bladder with sutures and pulling on them so that the field of operation is brought into the incision and close to the surface, or by having an assistant insert two fingers into the rectum or into the vagina, as the case may be, and thus force the base and the fundus of the bladder upward (Fig. 1). Sutures are now run beneath the insertion of the tumor and are promptly tied one by one in the path of the operator as he is excising the base of the growth (Figs. 2 and 3).

This detail in technic prevents the hemorrhage which otherwise would flood the field of operation and necessitate extensive sponging and continual hunting for the excision wound, and thus avoids a traumatism of the mucosa which might interfere with the prompt and complete closing of the bladder. Care should be taken not to grasp the tumor with the fingers or the forceps, since, as a rule, such growths are very friable and are apt to bleed profusely when crushed or torn. If the tumor be located close to the vesical portion of one of the ureters one end of the ureteral catheter is run a few inches up into the ureter, previous to the insertion of the preventive stitches, and the other end is led through the internal orifice of the urethra and thence outside by way of the urethra. Should some of the preventive sutures encircle the vesical end of the ureter the fact would become apparent on attempting to remove the ureteral catheter; it would be engaged. In this case the catheter is simply left in place for a week or so, until the healing process has progressed sufficiently, and then withdrawn (Figs. 4 and 5).

After the main tumor has been removed it is very important to inspect the entire inner surface of the bladder in order to discover smaller-sized papillomata, should such be present. Particular attention should be paid to the parts opposite the main tumor, since we often find these smaller growths in those areas which come in contact with it when the bladder is empty. This condition is of such frequent occurrence that the suggestion of contact infection forces itself on the mind. All such smaller tumors, if present, should be removed in the manner described above; the erroneous diagnosis of a relapse of the removed tumor is often due to the fact that these have been overlooked and not extirpated. After the viscus has been cleared of all growths, large and small, and after the excision line or lines have been

closed by sutures, the incision of the bladder is closed by means of two layers of sutures. The essential feature of this suturing is to bring together only denuded and bleeding surfaces and to prevent any impaction of the mucosa into the suture line.

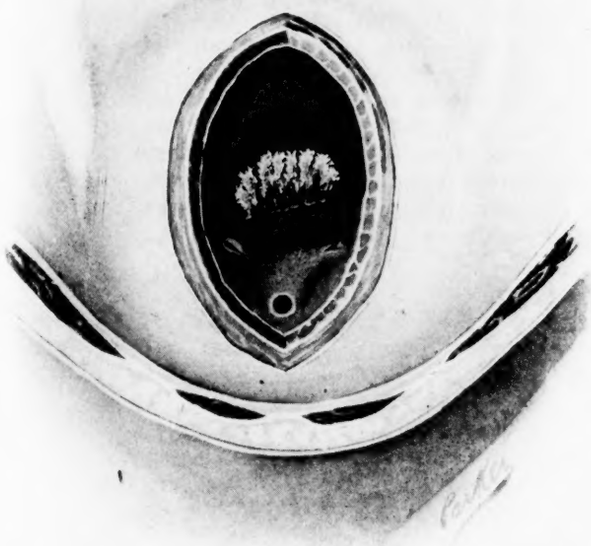

Fig. 1.—Benign tumor exposed.

The closed viscus is now so suspended to the abdominal wall as to exclude any dead spaces and thus prevent the accumulation of secretion; it is important, however, in order to prevent pressure necrosis, that the sus-

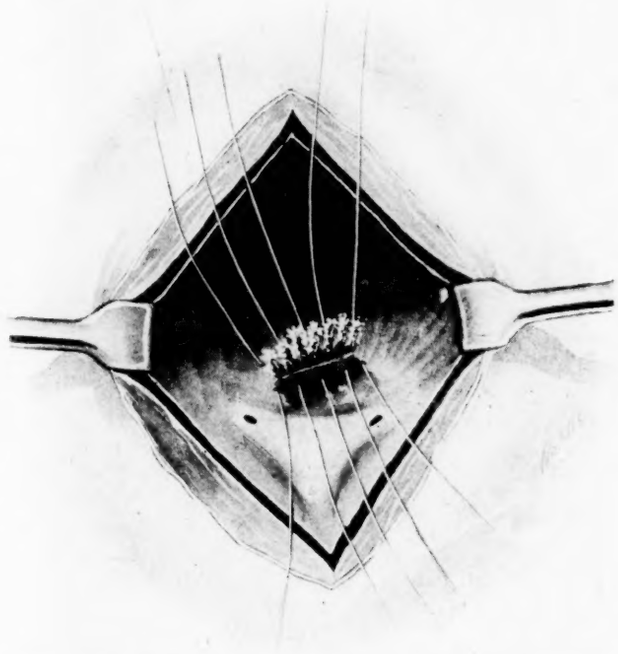

Fig. 2.—Preliminary sutures run underneath the base of the benign tumor.

pension sutures do not interfere with the suture line closing the vesical incision (Fig. 6). The abdomen is closed in the usual manner. As a rule patients urinate naturally a few hours after the operation; it is only when a patient does not do so that catheterism at proper intervals is resorted to. The permanent catheter should never be used, as it offers no advantage; on the contrary, it always leads to irritation, quite often to infection.

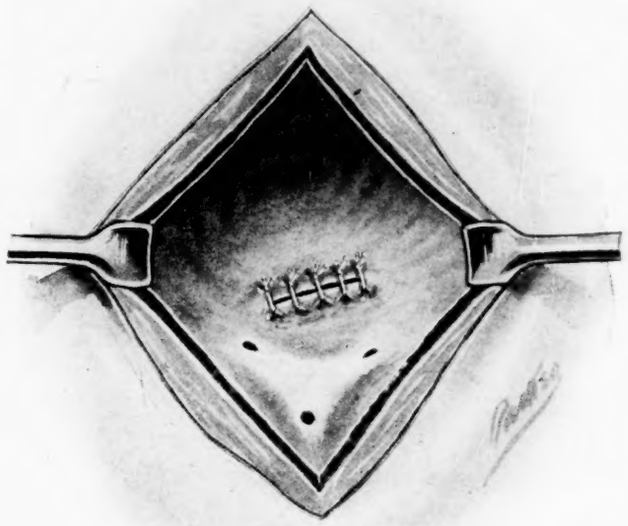

Fig. 3.—Suture line after removal of the tumor.

TRANSFORMING BENIGN INTO MALIGNANT GROWTHS.

It is often contended that the simple removal of benign tumors, such as is indicated above, leads in the majority of cases to recurrence, and that all recurrences are of a malignant character; on the other hand, there

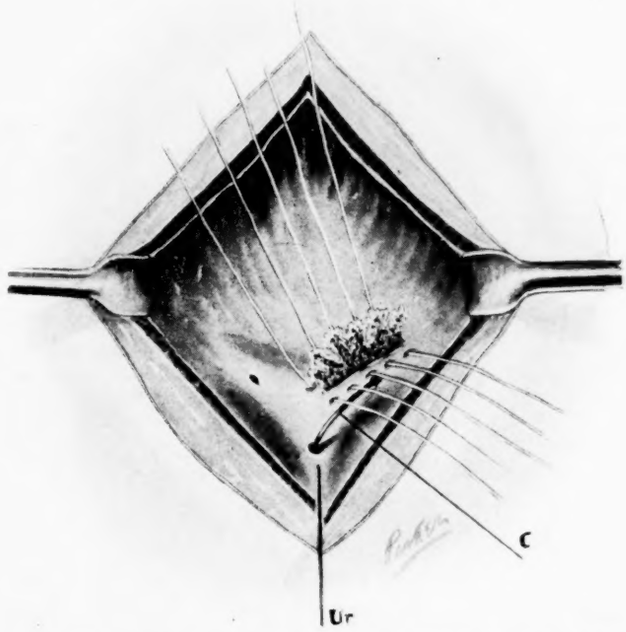

Fig. 4.—Ureteral catheter inserted into both ureter and urethra to prevent tying up of the ureter by the preliminary sutures. Ur. ureteral orifice; C, catheter.

are opinions which differ entirely from this contention, some coming from authoritative sources (Lubarsch, Birch-Hirschfeld). A kind of middle ground is taken by Wendel:

We are compelled to believe that not infrequently bladder tumors will appear which are, in outward appearance and in histologic and clinical characteristics, unquestionably benign, but which later on might become transformed into cancer. In all such cases there is a stage in which surgical interference

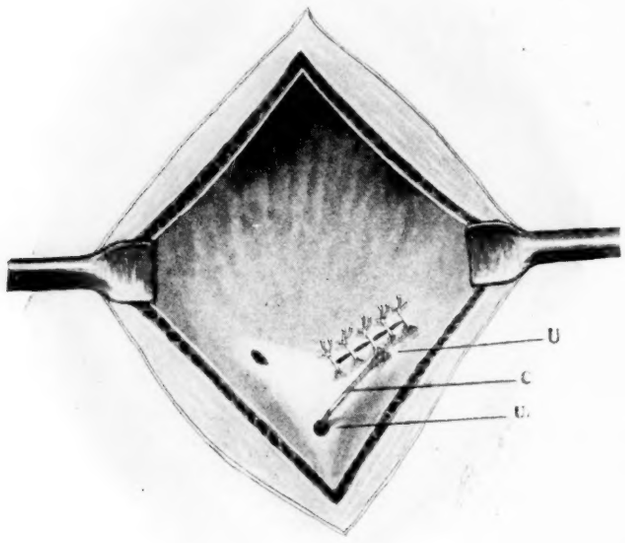

Fig. 5.—Suture line after removal of the tumor with catheter in place. Ur, urethra; C, catheter; U, ureteral mouth.

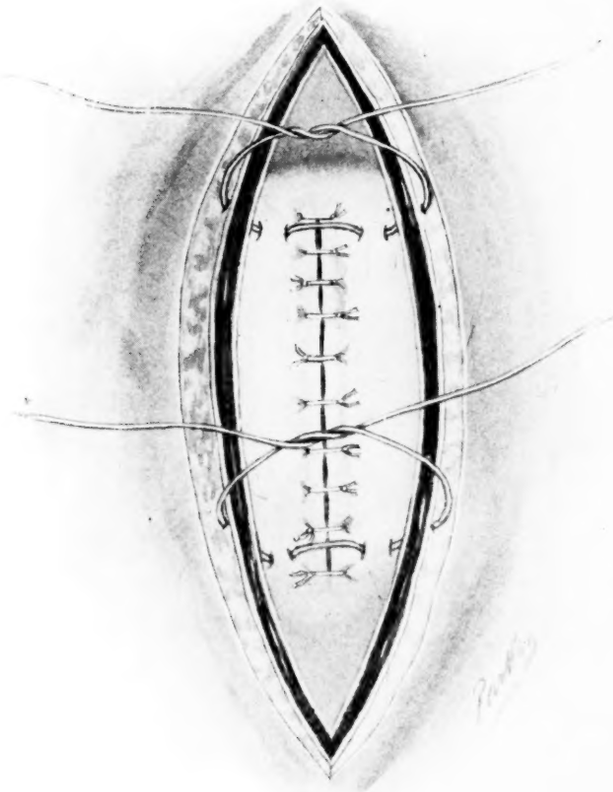

Fig. 6.—The closed bladder suspended to the abdominal wall by two sutures.

may occur early enough to remove these tumors with the same favorable outlook as is the case in other benign tumors.

As a matter of fact, most authors have relinquished the idea that benign tumors suffer relapse of malignant character (Rafin). All men of actual experience concur in the opinion that benign tumors should be operated on immediately after their discovery (Rafin, Malesherbes, Hegue, Escat, Desmos, Carlier, Hamonic, Nitze, Fischer, Casper, Fedoroff, Bary, Fedenat, Albarran and others).

Operations for the removal of malignant tumors should be guided by principles derived from sound surgical reasoning and not by traditional superstition. We believe that all operations of this character should be started from above, but at the same time we wish to say emphatically that the traditional method of making a suprapubic incision into the bladder and of then hunting for the malignant tumor from the inside should be absolutely condemned. If a surgeon were dealing with a pyloric carcinoma, would he first make an incision through one of the curvatures and endeavor, by

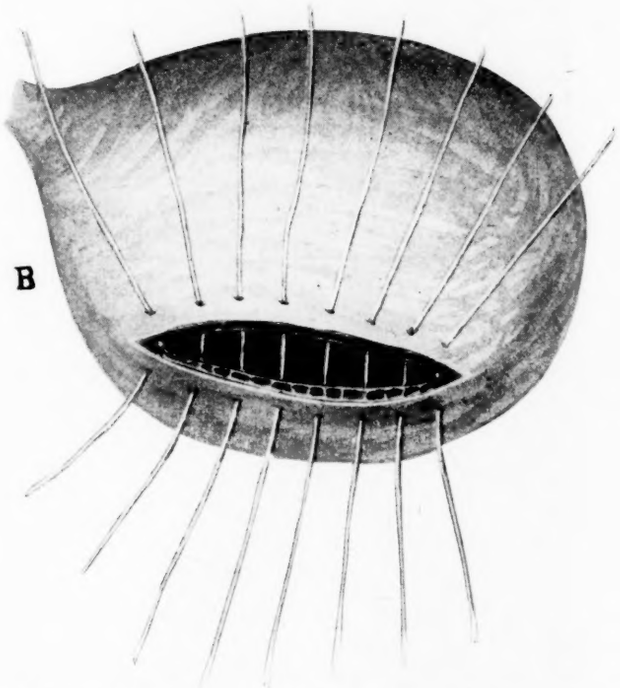

Fig. 7.—Excision of section of bladder wall carrying a malignant tumor. B, bladder; F, section.

working his way through this opening, to dig the cancer out from the inside of the stomach? Certainly not! Why should not the same reasoning hold good in operations for malignant tumors of the bladder? The incision into and through the bladder wall should be made as close to the location of the tumor as is consistent with the obvious demand that the lines of excision should run through apparently healthy tissue (Fig. 7). Making a routine median incision into the bladder regardless of the location of the tumor means inflicting an unnecessary injury on the bladder. The recognition of these facts calls for a topographic diagnosis of the tumor before operation and demands a free exposure of that portion of the bladder which is going to be in the field of resection. Sometimes the base of the tumor can

be definitely outlined, or the presence and extent of infiltrations ascertained only by palpation after the bladder is made accessible by detachment and incision.

The steps of the operation should be as follows: The suprapubic incision is made; the perivesical fat, which is thus exposed to view, together with the peritoneum, is stripped from the bladder to such an extent that the anterior aspect of the viscus is freely exposed. A few sutures are now drawn through this part of the bladder to serve as guy ropes in facilitating its further manipulation. The denuding of the bladder and its detachment from the adjacent tissue is continued until its exterior surface, in so far as it corresponds with the seat of the tumor inside, is exposed, thus giving additional leeway for resection through healthy tissue. The flap formed by the perivesical fat is now tilted back over the peritoneum and fastened there with a few stitches; in this way a firm protection is furnished for the peritoneum against subsequent infection.

The bladder is now dragged to one side by means of the guy ropes and an incision is made into its wall as close to the site of the tumor as is compatible with surgical demands. Then, by means of the index finger passed into the bladder through this opening, and the thumb outside, the extent of the second incision is determined by palpation; this second incision completes the resection and removes from the entire thickness of the bladder wall a sector which carries with it the tumor. It goes without saying that the excision will, as far as possible, be made in such a way as to facilitate the approximation of the edges of the wound. The resection, in case it does not remove more than one-third of the bladder, should be followed by total suturing of the viscus (Fig. 8). After the organ is closed, a cigarette drain is run down to the deepest point of the bed of the wound, the bladder is suspended to the abdominal wound, and all is closed up save for the point of drainage. The permanent catheter should never be used in cases of partial resection and subsequent complete suturing of the bladder; the patient either urinates naturally or is catheterized at appropriate intervals.

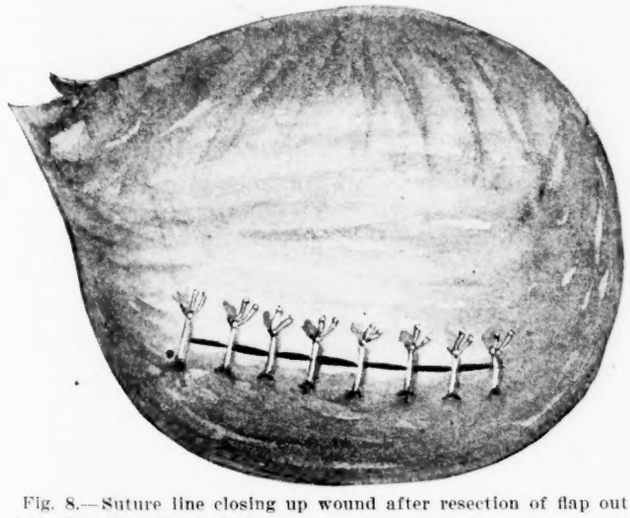

Fig. 8.—Suture line closing up wound after resection of flap out of the lateral wall of bladder.

WHEN THE URETERAL OPENING IS INVOLVED.

Should the tumor involve a ureteral opening, the bladder is dissected out to such an extent that not only complete excision of the tumor base becomes possible, but also the vesical end of the ureter is laid bare. The ureter is clipped off at its insertion into the bladder, and then the exsection of the tumor base, including the ureteral mouth, is accomplished. The stump of the ureter is now reimplanted into the upper end of the excision wound, after one of the standard methods, the wound of the bladder is closed as completely as is feasible (Figs. 9 and 10), and the wound cavity attended to appropriately.

In case a more extensive resection of the bladder wall is necessary, it becomes impossible to close up the organ entirely. However, an attempt should always be made to reform the bladder, as far as possible, by suturing and by attaching the edges of the remaining portion of the viscus to the abdominal muscles. It is astonishing to observe what a small remnant of the bladder will suffice to start the formation of a serviceable organ inside of a few weeks. We have on record three cases, two cancers and one sarcoma of the bladder, in each of which more than two-thirds of the viscus was removed. After about eight weeks in each instance, all was healed over and the patient was able to retain from 250 c.c. to 300 c.c. of urine; the action of the bladder was perfect, the stream being projected with force, the viscus completely emptied. One is induced to believe that muscle fibers grow from the bladder remnant into the cicatricial tissue which forms over the mutilated organ, and thus impart contractile power to this newly formed portion of the bladder.

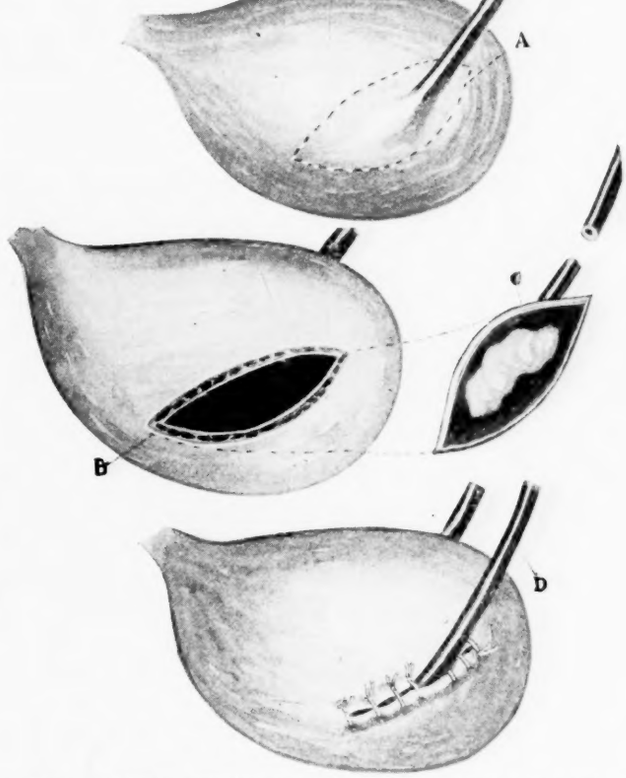

Fig. 9.—Section carrying tumor involving ureteral mouth cut out of bladder wall. A, puncture line indicating line of excision; B, bladder after excision; C, flap with tumor and ureteral stump; D, outside aspect of bladder after implantation of ureter and closing up of the excision wound.

In those cases in which a radical operation is no longer possible, there are two methods of relieving the patient's suffering. One method is to open the bladder from above and cauterize the exulcerated surfaces with a Paquelin; as a rule, this intervention does not benefit

the patient to any great extent, at least not for any length of time, for the urine flows into the bladder and over the excoriated and irritable surface of the tumor, and thus necessarily leads to permanent pain. The other method, which furnishes more satisfactory results, consists in establishing permanent kidney fistulæ and thus diverting the urine from the bladder; the patient is at once relieved from all pain and is made quite comfortable. A belt carrying two small pouches keeps the patient comparatively dry.

The choice of anesthesia is of the utmost importance in all cases of bladder surgery. Endovesical operations can, as a rule, be carried on under the influence of an antipyrin anesthesia supported by the rectal application of morphin. For the cutting operations, we always employ, as a matter of routine, the anesthesia produced by laughing gas. This anesthesia, besides being free from danger, so far as the heart is concerned, possesses a great advantage in that the patient returns to full consciousness immediately after the completion of the operation; this enhances the possibilities of natural micturition, of very early breathing exercises, and of the early administrations of food and drink. Up to the present time we have never observed any untoward influence of gas-anesthesia on the kidneys.

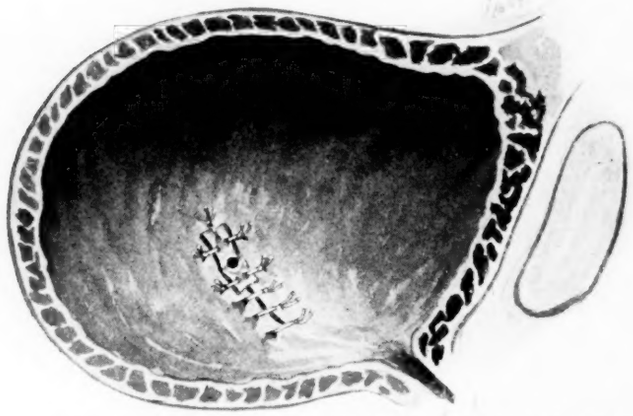

Fig. 10.—Inner aspect of the bladder showing the implanted ureter. Flap operation.

The next question that naturally arises is whether or not it is possible to determine, previous to the operation, the character of a bladder tumor; we do not hesitate a moment to answer in the affirmative and to say that such diagnostic work can be done with accuracy sufficient for all practical purposes. Any man with experience in cystoscopic diagnosis can recognize a benign tumor from its appearance (Nitze, Weinrich); tumors of doubtful nature are to be considered and treated as malign. In this connection it should be borne in mind that the benign papillomata comprise the majority of bladder tumors (Civiale, Thompson, Guyon, Soemmering, Kuester).

It was formerly held by a great many surgeons that, because of the poor permanent results and the quickness of the relapses, patients with malign bladder tumors should never be operated on. This view is shared at the present time by some writers. In our opinion, however, the soundness of such reasoning is, to say the least, open to discussion because, in the first place, a great many patients were and are still being operated on in an irrational manner, and, in the second place, because the diagnosis is quite often made so late that the chances for a successful operation are greatly reduced; the more general employment of the cystoscope, however, will greatly improve matters as to the latter point. Furthermore, it should be taken into consideration that the use of rational operative methods and the uniform employment of gas anesthesia will certainly reduce the primary mortality of these procedures.

As it is, there are two cases of vesical cancer on record in which total extirpation of the bladder accomplished a cure without relapse for five years (Hogge), and for fifteen years (Pawlik), respectively. Rafin reports five cases of partial resection of the bladder for carcinoma that remained cured for more than three years. In Czerny's sarcoma case the patient lived for twelve years after the operation without relapse. Quite a few surgeons report cases of malign bladder tumor which, after partial vesical resection, have remained cured for from one to three years (L. Davis, Pousson, Pitha, Leschnew, Albarran, Alessandri, Schmidt, Kolischer).

Mikulicz, in his last publication before his death, declared that he felt convinced that he had relieved the sufferings and prolonged the life of his patient every time he had operated for cancer of the bladder. Surely so impressive a message gives warrant for our belief that, even though nothing else were accomplished than the adding of a few years of comfort to the sufferer's life, the operation would be fully justified.

CONCLUSIONS.

In conclusion we desire to submit, as the result of our work along these lines, the following fundamental propositions:

1. All benign tumors of the bladder should be approached from the inside, all malign tumors from the outside of the viscus.
2. In all malign cases in which the loss of substance is not too great the bladder should be closed completely by sutures after the removal of the tumor.
3. In cases of malign tumor the incision into the bladder should be made in accordance with the location of the growth, as defined by the cystoscope.
4. The permanent catheter should be absolutely abolished.
5. Gas anesthesia should be employed exclusively.
6. A constant cystoscopic surveillance should be maintained over any bladder that has ever been operated on for tumor.

ONYCHOMYCOSIS TRICHOPHYTINA,

WITH REPORT OF TWO CASES.*

A. RAVOGLI, M.D.
CINCINNATI.

The nails, like any other epidermic tissue, are exposed to the invasion of the trichophyton, yet cases of the kind occur rather rarely. Sabouraud, in the department of the ringworm affections in the Hospital St. Louis, considers onychomycosis trichophytina a rare disease. Neuberger[1] referred to the fact that Anderson, in Glasgow, among 11,000 cases of cutaneous diseases, of which 178 were of trichophytic nature, did not have a single case of trichophyties of the nails. White, of Boston, in 5,000 cases of diseases of the skin, with 180 cases of tinea trichophytina, did not have one case of trichophytic onychomycosis. On the other hand,

* Read in the Section on Cutaneous Medicine and Surgery of the American Medical Association, at the Fifty-eighth Annual Session, held at Atlantic City, June, 1907.

1. Ein Fall von Onychomycosis Trichophytina, Derm. Ztschr., xi, 551.

Pellizzari, Arnozan, Dubruille have often seen cases of the kind, and Pick considers this affection of the nails not so rare as stated by the others.

In some cases of onychomycosis trichophytina, the origin of the fungus is clearly found as patches of herpes tonsurans in other parts of the body, showing the infection of the nail to be due to the act of scratching. Mahon noted the coincidence of herpes tonsurans of the scalp, with that of the finger-nails, which are in this way more frequently affected than the toe nails.

In rarer cases the nails only are infected with trichophyton, and yet the patient has never had any trichophytic affection in other parts of the body. A case of this kind was reported by Gerson,[2] where a man had the nail of the second finger of the left hand for two years affected with trichophyties, and gradually all the other finger-nails were equally infected, without showing any patch of trichophyties in any part of the body. The case of Neuberger[1] is of the same kind and shows that onychomycosis trichophytina can be found without there being other places of infection on the body, and that this condition exists a long time.

The assertion of Zinssers,[3] that tinea tonsurans of the nails never occurs unless preceded by attacks of the same in other parts of the body, falls to the ground.

ETIOLOGY.

It is easy to understand that any one who is affected with trichophyties of the body, and more especially of the beard and of the scalp, by scratching with his finger-nails, gets the spores of the fungus underneath the nails, and so the nails are infected.

To this class of cases is to be referred the case of Bosc and Galavielle[4] in a man who was suffering with an extended attack of trichophytosis of the body, and consequently showed alterations of the finger-nails, which microscopically and through culture revealed the presence of the fungus.

The presence of the trichophyton in the nails without any previous attack of trichophyties in other parts of the body gave to Hirtz and Jacquet[5] the idea that in these cases the fungus does not produce the disease primarily, but only secondarily, as a consequence of trophic disturbances of the nail. They reported two cases of trophic alterations of the nails, which showed great similarity, and in one they found the presence of trichophyton, while in the other it was absent.

I thoroughly agree with Krzystalowicz,[6] who maintains that, in order to establish the diagnosis of onychomycosis trichophytina, there must be found the fungus under the microscope.

Recently in my practice I have had two cases of onychomycosis, which are interesting to consider, one after the other, on account of their different clinical and pathologic features.

CASE 1.—*History.*—A man of 54, of splendid physique, married, had always enjoyed good health. In himself and his family no history nor trace of syphilis, psoriasis nor eczema could be found. He had been suffering for over twenty-years with his finger-nails and toe-nails, which did not cause him pain, but only discomfort. He was by occupation a flour merchant, and when he began to notice his finger-nails rough and diseased, he was under the impression that it was produced by an insect called "weaver," which is found in the flour. The first finger-nail to be affected was that of the second finger of the left hand. At the time I saw him it had completely disappeared and was replaced by a thin, atrophic and somewhat irregular scar. Some time later the nail of the third finger of the same hand was affected and there remains (Fig. 1) only a thin atrophic peeling. Gradually every nail showed signs of disease by losing its brilliancy, getting chalky, scaly and irregular. The nails were easily broken, causing inconvenience in the use of the hands. Some time afterward several toe-nails were equally affected. In all these years the patient never had any reproduction of trichophyties in any other part of the body. He had in the meantime consulted several physicians and many remedies had been given. The only benefit the patient had ever obtained was from bathing the fingers in a solution of bichlorid of mercury.

Examination.—A few months ago the man called on me to see if something could be done. On the first examination, the long standing of the affection, the absence of any ringworm

Fig. 1.—Hands of patient in Case 1, showing destruction of nails.

attack in any part of the body, were against the possibility of trichophyton infection. Every nail of the fingers and toes was affected in a different degree according to the time of its infection, so much so that while in the second and third fingers of the left hand the nails had been entirely lost, in the other fingers they were affected in different degrees. The nails were somewhat thick, opaque; their surface rough, uneven and showing longitudinal folds. The nails kept on breaking and splitting in longitudinal direction, and pieces of nail were hanging on the nail-bed. Where the nail had fallen or had been removed, as on the thumb of the left hand, an ugly irregular surface of the nail-bed remained, looking as if riddled by small holes. In order to establish the diagnosis a piece of nail was taken from the thumb of the left hand, it was softened in a solution of potash and then examined under the microscope. The fibers of the nail-plate contained spores and mycelia of trichophyton, which were arranged in rows between the edges of the epidermic cells forming the structure of the plate of the nail. Another piece of nail was washed in alcohol, crushed

2. Berlin. Dermat. Gessellsch., January, 1899; ref. Archiv f. Derm. und Syph., xlviii, 136.
3. Encyklopedie der Haut und Geschlechtkrankheiten, 1900, p. 225.
4. Onychomycose trichophytique, Arch. f. Derm. und Syph., xli, 419.
5. Hysterotoxia, Onychomycose trichophytique, Arch. f. Derm und Syph., ll, 447.
6. Die Pathogenen Haarpilze, Poln. Zeitsch. f. Derm. und Ven. ref. Monh. f. Pract. Derm, xlii, 428.

and was dropped into a culture medium of maltose-agar. After eleven days, around the piece of nail there appeared a light whitish area, which gradually extended by peripheral progress until it had invaded the whole surface of the culture. Some of the vegetation of the fungus was examined under the microscope, it proved to be a clear specimen of the ordinary trichophyton. The diagnosis was confirmed as that of onychomycosis trichophytina.

It was difficult, however, to conceive how it was possible that nails could get infected without any other point of the body ever having shown trichophyties, and that the toe-nails could also be infected without producing ringworm infection in other parts of the body. The explanation has to be found in the anatomic structure of the nail-plate and in the way that the fungus vegetates therein.

The photomicrograph (Fig. 2) shows the fungus penetrating between the interstices of the nail-plate, and the nail fibers separated just as we see it occur in the hair. In order that the vegetating fungus may be

Fig. 2.—Photomicrograph of nail-plate of patient in Case 1, showing fungus penetrating between the interstices of nail-plate. Bausch and Lomb 1/6 in. objective.

introduced in the interstices of the nail fibers, there is necessary a trauma of the nail. This patient used to trim with thin scissors the affected nails and then with the same scissors the other nails. It is clear that with the scissors he carried spores of trichophyton from one nail and inoculated them deeply into the structure of the other nails.

The fungus vegetating inside of the fibers of the nail is protected and can not easily be transported to other parts. This satisfactorily explains how the trichophyton could remain for so many years in the nails without being conveyed to other parts of the skin.

It will now be of some interest to make a brief comparative study of the other case of onychomycosis, where the scalp had been affected with tinea trichophytina.

CASE 2.—*History.*—In this case a few weeks after the patient had the affection of the scalp three finger-nails of the right hand became badly infected. The nails were of those three fingers which he used in scratching his head to relieve the itching. The occipital region of the scalp was covered with large irregular trichophytic patches (Fig. 3), evidently the result of several round spots coalescing. The spots were partially bald, studded with stumps of hair, covered with thin, dirty, adherent scales, showing the clearest features of the trichophyties of the scalp. The nails were inoculated a short time afterwards and Figure 4 shows that the appearance of the affection consisted in a more acute process, and the injury produced in the nails was much more perceptible. Indeed the nails were entirely of a dirty yellow hue, chalky, thin and atrophic towards the matrix, and thickened and irregular towards the free edge of the nail-plate. The surface showed holes and crevices in the nail substance and large pieces of the nail were breaking and detaching themselves in a transverse direction. This is easily explained when we remember that in this case the fungus had not been brought to the internal structure of the nail-plate, but it had been placed on the surface of the nail in its eponychium, hyponychium and in the subungual epidermic layer. Consequently the fungus had to work its way through, so as to reach the laminar structure of the nail.

This is well proved by the microscopic examination and by the photomicrograph (Fig. 5) which was made by my assistant, Dr. George H. Werk.

The action of the fungus on the epidermic structure, according to Leslie Roberts, is that of digestive power on the horny tissues. It penetrates into them, making them its habitat. It detaches the epidermal cells one from another, and by digesting the hard membrane appropriates their plasma as nutrition and consequently the epidermal cells die.

Fig. 3.—Scalp of patient in Case 2, showing large trichophytic patches.

In the first case where the nail-plate had been primarily affected, the resulting alterations were somewhat different. The fungus with its spores and mycelia was disposed in long rows between the epidermic fibers composing the nail-plate, just in the same way as it is disposed in the cortical layer of the hair. Consequently the fibers composing the body of the nail were torn one from the other and the nail was breaking in a longitudinal way, according to the direction of the fibers. In the second case where the fungus from the eponychium had invaded the nail superficially, the nail had shown a tendency to break irregularly in large scales and more often transversely.

In order to ascertain whether the difference of the alterations could be produced by different kinds of trichophyton I resorted to the culture. Maltose-agar was used as a culture medium in the Erlenmeyer bottles. One culture medium was inoculated with a piece of nail of the patient in Case 1, and in the two others one was

inoculated with scales of the scalp and the other with a piece of nail of the patient in Case 2. In all positive results were obtained. The culture medium inoculated with the epidermic scale of the scalp showed, four days after the inoculation, a whitish, dusty halo around it, which gradually began to spread peripherally. The nail culture of the second patient showed the same condition after six days, while the nail culture of the first patient did not show signs of any result until after eleven days. The result of the culture was the same in every one, consisting of an abundant whitish, purulent, thin growth of the fungus, trichophyton megalosporon endo-ectothrix, with large spores of the common kind often taken from domestic animals.

The cultures proved that the fungi were the same, but this did not furnish any explanation in reference to the difference of the pathologic alterations. The only explanation I find is in the way of the introduction of the trichophyton into the nail structure. In the first case it was inoculated by the scissors in cutting and trimming the nails, and the spores were introduced into the interior structure of the nail-plate. In the second case the spores had been deposited in the eponychium and in the subungual layers, and consequently they had attacked the nail from the outside toward the inside of the nail-plate.

Fig. 4.—Showing infection of nails in same patient as Fig. 3, due to scratching of scalp.

The distribution of the fungus in the superficial layers of the nails, or in the intimate structure of the nail-plate, is a sufficient reason for the difference of the course in the two cases. In the first case the disease lasted for over twenty years without giving a chance to the infectious spores to be transported into any other part of the body. The spores growing between the interstices of the fibers forming the nail-plate are protected, and it is not easy for them to be transferred to other parts except by cutting the nail. While in the second case where the parasite was vegetating on the eponychium and in the subungual folds of the finger, the nail was attacked from the external layers towards the internal. The distribution of the parasite explains how easily the spores of the trichophyton can be transferred from the nails to other parts of the body.

In my cases the ultimate result of the fungus on the nails has been that of causing complete atrophy. My experience is more in accordance with that of Kaposi,[7] who maintained that in the trichophytic affections the nail disappears by atrophic process. Censi,[8] however, referred to the possibility of the hypertrophy of the nail in form of onychogryphosis and made a variety of onychogryphosis trichophytina. I believe, however, that in those cases the alterations of the nails were not due entirely to the parasite, but the distrophic conditions were due to other causes and the trichophyton was of later occurrence.

PROGNOSIS.

In cases in which the parasite is hidden in the interstices of the cells of the nail-plate, it can be reached only with great difficulty, and the obstinacy of the case, lasting for over twenty years, shows that the prognosis is bad. In the cases in which the fungus is on the surface of the nail-plate, however, it can be reached and the fungus can be destroyed, and with constant treatment we are rewarded by seeing the nail grow free from the disease.

TREATMENT.

In the case of the first patient it appears, from the condition of the nails, that anything which was used brought only a temporary relief, while in the case of the second patient with constant applications of Wilkinson's ointment the patient obtained perfect recovery within four months. This shows that in one case the spores were protected in the interstices of the cells forming the plate of the nail, and can be reached only with great difficulty. It is difficult, indeed, to bring a case of onychomycosis of the first type to recovery, so much so that in many cases it has been necessary to remove the nails. The affected finger is wrapped up in lint, well saturated with salve containing a large percentage of pyrogallic acid so as to produce an inflammatory condition of the nail, an artificial paronychia. In this way the nail is detached from the surrounding epidermis and it can be removed. This method is rather severe and not all patients are ready to submit to it.

Fig. 5.—Photomicrograph showing spores and mycelia of trichophyton invading substance of nail.

7. Die Patologie und Therapie der Hautkrankheiten, Vien.

8. L'onicogrifosi Tricofitica; Giorn. Ital. delle malattie veneree e della pelle, xxxiii, 5.

My patient, when the pyrogallic acid began to inflame the skin, stopped its application and discontinued treatment.

Pellizzari[9] reported one case of onychomycosis as cured by means of the Roentgen rays. He claimed that nine exposures of ten minutes each were sufficient to effect the recovery. It was my intention to apply the rays, but the patient did not come back.

The other patient was kept in the hospital and was put to work as an orderly in the ward. Good results were obtained from the application of unguentum Wilkinson to his scalp and fingers. I ordered his scalp and his fingers to be scrubbed with pure green soap once a day, and then rubbed and covered with the ointment. When he left the hospital the trichophytic patch of the scalp was perfectly healed, and the nails had all grown out new, showing no signs of alterations. The patient, so far, has not returned, which I consider a proof of permanent recovery.

DISCUSSION.

DR. J. B. KESSLER, Iowa City, said that six or seven years ago a farmer reported having barn itch. He had a fungoid eruption on the back of the hand, and its inflamed, elevated border contained pus. Accompanied by a veterinarian, Dr. Kessler visited this farmer's place and found about the noses and necks of the calves circles that looked like asbestos. These lesions were scraped close to the roots of the hair, where numbers of trichophyton fungi were found. Several calves and one horse were affected. Farmers thus infected are very apt to carry the infection to the barber shop. Dr. Kessler considers this the most common method of spreading the disease. It is a curious fact that, as soon as spring time comes and the farmer turns his calves out to pasture, they recover very rapidly from this affection, and when they are again confined to the pens during the cold weather they again contract the disease. Those who do not live in a farming district will probably find, on investigation, that trichophytosis is spread in the barber shops from human to human, and that this type of disease is comparatively easy to cure, but when a patient is thoroughly inoculated from a calf, the affection is much more virulent and more difficult to eradicate.

DR. M. L. HEIDINGSFELD, Cincinnati, said that he is firmly of the opinion that the infection of the trichophyton does not take place directly in the nail substance, but in the tissues from which the nail is originally formed. It is difficult to conceive how a hard, non-succulent substance like nail, after it has once been perfectly formed, can be a culture medium for any form of infection. Products like the nail and hair once removed from the body show no effect after inoculation with fresh, active cultures. The infection of the trichophyton occurs primarily in the nail-fold and extends thence to the matrix, which becomes inflamed and so pathologically changed that any nail substance which is subsequently formed is rough and irregular in outline, opaque in appearance and contains areas of cells corresponding to layers of imperfect keratinized cells, derived from the matrix. These round, imperfect keratinized cells are the round bodies which Dr. Ravogli has mistaken for spores. These conclusions were drawn by Dr. Heidingsfeld in a paper presented to this Section some seven or eight years ago. That nail substance when placed on culture media should grow fungus, possesses no significance inasmuch as contamination of this character occurs from almost any substance under similar conditions.

DR. GRANVILLE MACGOWAN, Los Angeles, Cal., agreed with Dr. Heidingsfeld that the infection in these cases takes place in the nail-bed. It is an exceedingly disagreeable affection, particularly in women, whether they be servants or in the higher walks of society. Dr. MacGowan has seen a number of these cases during the past five or six years, and has been rather at a loss what to do for them in order to get a speedy recovery, until he happened to think of the old remedy common among farmers and known as "sheep dip," or Vleminckx's solution, which is practically a solution of calcium sulphid, in which they soak their hands at night. He has found this very efficacious as a temporary expedient, while for permanent relief he prescribes an ointment of the oleate of tin, which, together with the *x*-ray, proves most satisfactory.

DR. M. L. HEIDINGSFELD, Cincinnati, expressed the opinion that the best results of treatment are obtained if attention is directed to the nail-fold and not to the nail itself. The remedy he has found most efficacious is a 1 per cent. solution of corrosive sublimate in ether and alcohol.

DR. A. RAVOGLI, Cincinnati, said in regard to the non-inoculability of the nail to trichophytosis, that the presence of the trichophyton in the nail tissue has been successfully proved by inoculation on culture medium. The spores can not be so well shown in the microphotograph on account of the difficulty of staining them.

9. Lo Sperimentale, 1906, lx, 6.

TWO CASES OF TUMOR AT THE PONTO-CEREBELLAR ANGLE WITH AUTOPSIES.

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In presenting these two cases no attempt will be made to review the literature of the subject of tumors at the ponto-cerebellar angle, which has now become quite extensive. They are recorded as a contribution to the subject for what they may be worth as clinical and post-mortem records.

CASE 1.—*Patient.*—A single man, clerk, aged 29, was admitted to the Allegheny General Hospital on April 18, 1905, in the service of Dr. T. M. McKennan, to whom I am indebted for the early notes of the case and who was first to make the correct diagnosis.

History.—The family history was unimportant. The patient had enjoyed good health up to the time of his present illness. His personal habits had been good. He denied syphilis. The present illness began about a year previously with headache, which soon became of daily occurrence, and grew more and more severe. It was noted about this time that his gait was uncertain, like that of a drunken man. About a month later the patient complained of some failure of vision and also of occasional dizziness. By autumn the uncertainty of gait, augmented by dizziness, had grown to such an extent that the patient was compelled to use a cane in getting about. In November he had some difficulty in speaking and swallowing. Speech was not quite so clear, and an occasional difficulty in swallowing occurred. He masticated with difficulty on the left side; he used the right side exclusively. The head pains became especially severe by December and were localized chiefly in the occiput. About three weeks before admission these pains left him. They were nearly always associated with vomiting, which was sudden and forceful. He had sometimes vomited when he did not have headache. On admission he complained of numb sensation over the right side of the body. He also complained of some dizziness.

Examination.—(Dr. McKennan.) The patient was a strong, well-nourished man. The pupils reacted well to light and accommodation. No satisfactory examination of the eye-grounds. There was slight nystagmus. A slight internal squint in the left eye was present. The tongue was protruded toward the left side. There was no wasting of the tongue or lips. The patient's enunciation was not distinct. His saliva dribbled when he was speaking or eating. The sense of taste was absent over the left half of the tongue, and the sense of touch almost absent. On the right side taste and touch were present, but decidedly impaired. The patient masticated on the right side exclusively. Left masseter weak. With the left ear the patient could not hear the ticking of a watch. With the right ear hearing was better, but impaired. The sense of smell seemed good. There was some enlarge-

ment of the post-cervical glands. Thoracic and abdominal viscera were normal. Arteries were normal. Arteries at the wrist were somewhat sclerotic.

Reflexes: The knee jerks were much exaggerated, equal on both sides. There was a distinct Babinski toe reflex on the right side, but none on the left. No ankle clonus.

Sensation: Contact sense was diminished over the entire right side. Normal on the left.

Pain and temperature senses were normal and astereognostic appreciation was normal.

Motion: Somewhat impaired on the right side.

Gait and Station: The patient could not stand alone, but swayed like a drunken man. When assisted in walking he lunged backward and forward and sidewise in an uncontrollable fashion.

After admission the patient vomited frequently. A month after admission his deafness was nearly complete in both ears. Vision failed rapidly and he became almost blind. The tongue protruded more to the left side. A slight paralysis of the left face was now apparent and also an internal squint of the left eye (abducens palsy).

About May 19 the patient suddenly ceased breathing, became cyanotic and then unconscious. Under artificial respiration he gradually recovered. He suffered from some eight or ten subsequent attacks of a similar character, more or less severe and prolonged. The last occurred Aug. 27, 1905, and terminated his life.

For several weeks before his death he had been free from headache and vomiting; and as noted he had been totally deaf for four months and totally blind for three months immediately preceding death. His staggering was so extreme as to confine him to bed. Mentality remained fairly good to the end, except for two or three periods, when he was for a short time delirious with delusions and hallucinations.

Autopsy.—This was performed by Drs. Willets, Wright, Jones and myself. The brain only was removed. On removal of the brain a large quantity of fluid escaped. The ventricles were considerably dilated and held three or four times the usual amount of fluid. A tumor, about the size of a hickory nut, was discovered apparently growing from the anterior margin of the left cerebellar hemisphere close to and pressing on the pons, which was deeply indented to accommodate it. The upper portion of the oblongata was also, but to a less degree, pushed over and flattened by pressure from the tumor. The tumor was of a firm texture, grayish in color. It adhered to the dura and a small portion was broken off in removing it. Probably the tumor really grew from the dura and later became attached to the cerebellum. Dr. Willets, who has made a section of it, reports that it is spindle-celled sarcoma. It presents the appearance of an endothelioma, as described by Dr. Blackburn in his work on brain tumors. (See Fig. 1.)

In the presence of headache, vomiting, vertigo and staggering a cerebellar tumor was indicated; and it was supposed to be at the left ponto-cerebellar angle because of the involvement of the cranial nerves on the left side from the fifth to the twelfth inclusive. The marked involvement of the left fifth and eighth nerves, together with the cerebellar symptoms, especially indicated this diagnosis.

The situation of the tumor with its direct and indirect pressure readily explains the involvement of the last cranial nerves or their nuclei on the left side. But why the function of the eighth nerve should be totally destroyed and the seventh be only slightly affected, since both nerves arise closely together at the lower border of the pons, is an interesting question which I am unable to answer.

Perhaps bilateral auditory neuritis may be set up by intracranial pressure like optic neuritis, or the bilateral course of the eighth nerve fibers may in part explain the case. For a time the possibility of the pressure of a second tumor was considered as an explanation of the bilateral deafness. But the tumor was finally localized in the exact situation in which it was found at the autopsy.

The right-sided paresis, Babinski toe reflex and loss of contact sense are readily explained by the pressure which the tumor exerted on the motor and sensory (left pyramidal and fillet) tracts before their decussation.

The question of the operation was considered by Dr. McKennan and myself, but neither felt like advising it, despite the few reports we have of partial success following attempts at removal of tumors on this situation.

CASE 2.—*History.*—A woman, married, aged 42, the mother of four children; previous history not important. Her illness began over three years ago with what was then thought to be hyperacidity of the stomach, which was rather a troublesome symptom. Six months later she went to a sanitarium where she remained four months. The findings here were a lack of acid in the stomach, according to the patient's report. While at the sanitarium, she had an attack of unconsciousness, which lasted from 8 a. m. to 4 a. m., twenty hours. The next day she returned home, weak, emaciated and not improved. An examination by a competent gynecologist showed her pelvic organs to be normal. Since the beginning of her illness the patient had been troubled with

Fig. 1.—Tumor in Case 1.

frequent attacks of vomiting, from which she had never been free for more than a few days at a time. This vomiting occurred at any time, whether the stomach was full or empty. It often occurred soon after awakening or before food was taken. It was usually accompanied by or preceded by some nausea, not a great deal. She often vomited many times a day.

For two and one-half years previously she had been subject to headaches, which were not so severe at the time I saw her as formerly. They were most severe eighteen months previously, and especially so for a period of four months, immediately following the prolonged attacks of unconsciousness referred to. She located the headaches at first chiefly at the top of the head and later in the upper frontal region; they were not localized on one side especially. Following the attacks the patient had frequently fallen into spells of unconsciousness, which, however, were always of short duration, lasting from six to eight minutes. These attacks were frequently, not always, accompanied by jerking; and this jerking was most frequently seen in the left arm and left leg, but the right arm and right leg also were affected. Sometimes jerking was confined to left arm and left leg. Unconscious spells occurred without any jerking; and jerking spells occurred without loss of consciousness. Such spells often occurred while the patient was walking on the street,

and her husband was compelled to support her to prevent her from falling.

Early in the spring before I saw her she noticed a defect in her vision. Two months later examination by Dr. Wile demonstrated double optic neuritis. The discs were swollen and showed many hemorrhages. Following this a degree of optic atrophy developed and the vision rapidly failed; the patient when seen was nearly blind, having only light perception. For a period of four months the patient was under Dr. Day's treatment on account of dearness of the left ear; she had never had running at the ears. No improvement followed the treatment. The patient had much vertigo at the beginning of her illness, but this did not persist.

Examination.—On Aug. 28, 1906, the patient was very weak and emaciated. Her mental condition was normal. She was nearly blind and was deaf in the left ear. Sensation was normal and there was no true palsy of any kind; the knee jerks were very sluggish. Examination of the eyes showed the pupils widely dilated. The eye-grounds showed extreme double optic neuritis, with many hemorrhages. The patient was seen by me but once, and because of her weak condition the examination was made as brief as possible.

Diagnosis.—Tumor of the brain; location undetermined. The patient was advised to go to a hospital for observation, and for the performance of an operation, for the removal of the tumor if it could be located in a region accessible to the surgeon, or else for a decompression operation for the relief of optic neuritis and other symptoms. She did not go

Fig. 2.—Tumor in Case 2.

to the hospital, but rapidly failed, and died about three weeks later (September 17).

Autopsy.—This was performed by my assistant, Dr. George Wright, and Dr. Steinmetz, and revealed a tumor the size and shape of a hulled walnut at the left ponto-cerebellar angle. (Fig. 2.) It was firm in consistency, loosely attached to the pia mater, free and not imbedded in the brain deeply as was the tumor in Case 1.

As before stated, this patient was seen by me only once, and while the diagnosis of brain tumor seemed plain enough, the evidence gained from the history and from my examination did not to me indicate its location. I subsequently learned from Dr. Day that at the time of his study of the case he had concluded that the left-sided deafness was central in origin. Had I possessed this knowledge and been privileged to have studied the case further, I think it is not unlikely that the tumor might have been localized. In the light of subsequent events it is highly improbable that an operation after I saw the patient would have been successful in either removing the tumor or in relieving symptoms and prolonging life. But the size and character of the tumor and its very loose attachments all point to the view that it would have been a peculiarly favorable one for removal by operation, as compared with other tumors in this situation, had it been localized at a much earlier stage of its development. I do not, of course, mean that this would have been an easy matter, for, as is well known, all operations for removal of tumors at the ponto-cerebellar angle are extremely hazardous.

On the other hand, the removal of the first tumor, deeply imbedded as it was in the pons and oblongata, would have been more difficult, if not impossible, notwithstanding the fact that it was exactly located.

Westinghouse Building.

CARCINOSIS OF BRAIN AND SPINAL CORD.*

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This case is of rather more than usual interest inasmuch as no diagnosis of the true lesion in the brain had been made before death. Five or six eminent neurologists at various times saw and carefully examined the patient in the course of the last two years, and their diagnoses varied from a "pure hysteria" to "neuritis based on morphinism." Only in a single instance did the opinion come near the truth. This was at a consultation about two years ago, at which it was maintained that the patient suffered from a metastatic tumor of the cord. It is only just to state that this latter diagnosis was, I believe, arrived at by exclusion and not directly from any symptoms. Nothing was stated of any possible brain involvement at any time. When it is seen how greatly the cerebral cortex had been interfered with, one can but wonder at the paucity of signs and symptoms presented during life.

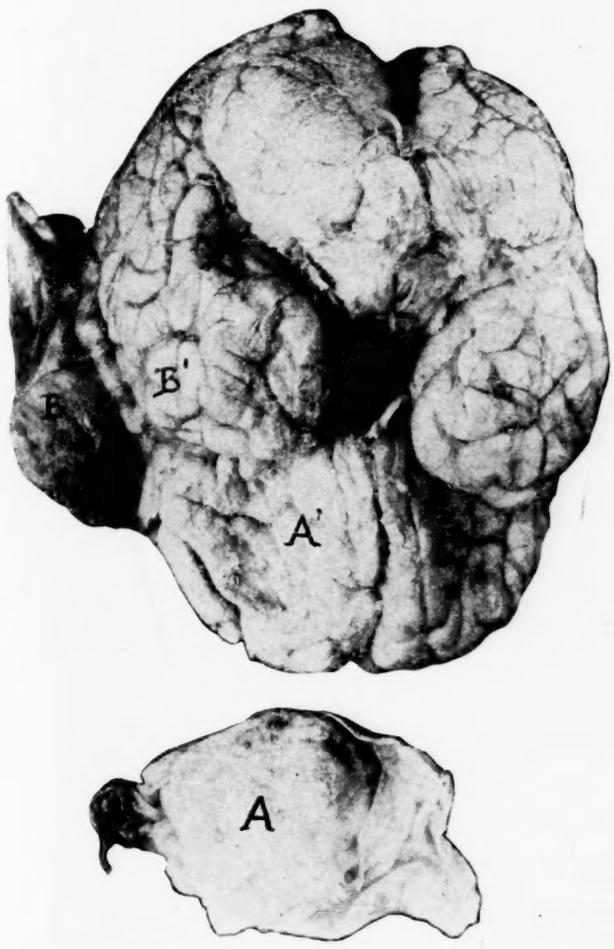
In the following history I am largely indebted for the data to Dr. Bernard Zweighaft, who had the patient under his careful supervision for some years, and to Dr. Robert Abbe, by whose means the autopsy was obtained.

Early History.—The patient was a woman, aged 43, at death, married, the mother of several healthy living children. In 1899 an ulcer of the leg made its appearance which resisted all forms of treatment for about a year until it was treated specifically. Under dram doses of potassium iodid it healed in a few weeks. Syphilis was denied. In 1901, the patient consulted Dr. Abbe with a typical scirrhus carcinoma of the left breast. She had had sharp pains in the left breast and arm for the past year. The complete operation was done by Dr. Abbe; breast pectoral muscles and axillary lymphatics were removed. One year later, November, 1902, the patient was examined and found perfectly healthy both as to scar and to side. After the lapse of still another year, namely in October 1903, the scar was still perfect but the patient complained of neuralgic pain at the site of the right fifth and sixth intercostal posterior roots, and pain around the side. Health otherwise was good and the lungs were normal. At this time, the diagnosis of spinal metastases of dura and roots was made by Dr. Abbe. It was necessary to give morphin for pain. Otherwise there were no local signs. There were symptomatic pains of neuralgic and rheumatic type in the fibrous and muscular distribution of her side. At this time a plaster jacket was applied with the patient in suspension. Relief followed for three days, after which the jacket was removed, the pain having recurred. It was again replaced but without relief. During all this time the patient was not bedridden, but morphin and anodynes were constantly necessary.

Condition in 1904.—One consultant after another was called in. None agreed with the first diagnosis of spinal metastasis.

* Read before the New York Neurological Society, February, 1906.

It was now either a pure neuralgia, neuritis, hysteria, neurasthenia, or a combination of these. The patient developed a slight convergent squint. After the administration of morphin, this was accentuated. The fundus was normal. There was also a slight deflection of the tongue to the left. The patient could however, straighten it when asked to do so. There now developed shooting pains in both legs. Her gait became uncertain. Knee jerks were normal or slightly exaggerated. There was no change in the pupil. There was intense hyperesthesia of spine. A consultant at this stage declared that he could make no diagnosis satisfactory to himself. So far as treatment was concerned during this time, Roentgen ray treatment was carried out by Dr. Zweighaft, with little relief to the patient. Also, Dr. Abbe was kind enough to allow the use of one of his radium tubes for some time. The application of both of these agents was to the spine at the level of the fifth and sixth dorsal vertebræ. Morphin was constantly resorted to, although in small doses. The coal-tar derivatives likewise were occasionally used with temporary relief.



A, Larger tumor removed from its bed under the left prefrontal lobe A'. B, smaller tumor reflected with the dura from its bed at B'.

Present History.—The patient was first seen by me Sept. 2, 1905. Her general condition was good; she seemed well-nourished. Her facial expression gave one the impression of real physical pain being endured. The one thing that she wanted relief from was the pain. This was of the nature of an intense rachialgia at the base of the spine, thence radiating for a short distance up the spine and downward along the course of both sciatic nerves. She complained of practically nothing else. A minute after a hypodermic injection of morphin she was free and smiling. There was no headache, nausea or vomiting and no vertigo. Appetite was fair. Mental condition was excellent. A point I should like to bring out here is that menstruation had ceased about 6 months previously. I have heard it stated that premature cessation of menstruation frequently points to brain tumor.

Physical Examination.—The patient was stout generally, with the exception of both legs, which seemed atrophied and the skin of which was glossy. There was a Roentgen ray burn at the level of the fifth and sixth vertebræ which needed daily dressing. There was an area of alopecia on the left side of the head about 3 cm. (1⅛ in.) in diameter. This later was found to correspond exactly with the position of one of the tumors lying directly underneath that part of the vault. The skin of the entire body had imbedded in it discrete non-inflammatory masses, about the size of a hazel nut. The scar of the operation was in perfect condition, and no glandular enlargements were demonstrable. The heart, lungs and other organs seemed normal as to size and function. The urine was normal except that the phosphates were largely in excess.

Special Symptoms.—1. The entire spine was hypersensitive. At the levels of the fifth, sixth and seventh vertebræ the pain on pressure was excruciating, eliciting shrieks of pain. This one symptom remained constant. 2. There was a band of anesthesia around the abdomen varying in width and in position daily. On either side of this band was an area of paresthesia. 3. There was a loss of knee jerks. Both pupils were contracted, though they were not of the Argyll-Robertson type. 4. The left eye showed some nystagmus. 5. There was ptosis of the left lid, and a slight convergent squint. 6. The tongue deviated markedly to the left, though the patient could somewhat correct this on trial. 7. The temperature of the right hand was always 2 degrees higher than that of the left hand. The left averaged 96 F. 8. There was a slight thickness and slowness of speech reminding one of the speech of beginning bulbar palsy. 9. Deglutition was slow and necessitated effort. 10. Although I have stated that there was no headache, it may be said that on several occasions, the patient complained of a frontal headache which was relieved at once by cold compresses. 11. Almost all the usual symptoms of hysteria were engrafted on the foregoing, thus the globus, the insensitive corneæ, the craving for sympathy, the hysterical crying, all were present. Opposed to these positive signs and symptoms there were the following negative conditions: There was no ataxia. Although the gait was slightly unsteady, yet this seemed to be due more to muscular weakness through non-use than to disease. While in bed, the patient could move her legs and feet in any direction, the muscular, tactile and temperature senses also seemed perfect. Control of bladder and rectum was unimpaired. There was no tremor of hand, tongue or facial muscles. The mental condition was excellent, there being no aphasia, agraphia or other memory fault. As said before, there was no vertigo, no nausea and practically no headache.

Treatment.—It seemed to me that the most rational way of beginning treatment at this stage was to consider the case one of specific origin. I therefore ordered mercurial inunctions administered together with large doses of potassium iodid extending over a period of three weeks. There being no improvement this treatment was discontinued. For the pain I endeavored to substitute hyoscin and the coal-tar derivatives for the morphin, but to very little purpose. It was necessary to give a minimum of from ⅛ to ¼ grain a day. Several sterile-water hypodermatic injections were also given during each day with frequently very good result. But without opiates it was almost impossible to control the patient. A consultation at this time brought out the suggestion, that the patient was suffering from a neuritis due to the long-continued ingestion of morphin and that there was also a condition of hysteria. It was further suggested that she be treated away from home, that codein and finally bromids be substituted for the morphin; and the promise of ultimate cure was held out. These directions were carried out. The patient, after the first few days of extreme agony following her deprivation of morphin, began to show signs of improvement. Thus, she complained much less of her backache; she appeared brighter, conversing with spirit and showing but little of her old-time depression. However, her speech became somewhat thicker and deglutition rather more difficult. On October 12,

she was so much better that with a little assistance she was able to get about her room. On October 13, she sat up for meals. She was now taking no medicine at all. Suddenly, on the night of October 14, her breathing became labored. Her temperature rose rapidly to 103 F. In spite of all measures, the breathing became worse and the next morning cyanosis developed. The temperature, which had fallen to 101 F. again rose gradually. The patient could now be roused with difficulty. Respirations were 72 and the rectal temperature rose to 107 F., 108 F. and finally to 109.5 F. A specimen of urine obtained by catheter showed the presence of sugar for the first time. The patient rapidly sank, the coma became more profound; edema of the lungs set in; the pulse rate rose to 150 and weakened until it became imperceptible, and death soon supervened. There was no convulsive seizure at any time.

AUTOPSY REPORT.

Mrs. C. S., October 17, 1905, by Dr John H. Larkin.

External Examination.—Body of a well nourished woman, pale fat tissue abundant; no postmortem lividity or rigor. Left breast had been removed and large scar remained of operation site. Skin was firmly bound down to chest wall by firm cicatrix. There were multiple nodular masses scattered over the body, varying in size from a pea to a hazel nut. The larger masses were umbilicated and all the nodules were in the skin proper. There was a Roentgen ray burn over the seventh dorsal vertebra.

Internal Examination.—Lungs were free in pleural cavity. The pleural surfaces of both lungs were studded with smaller and larger masses which could easily be traced along the lymph spaces on the pleura, giving the pleura a peculiar net-like appearance. On section of the lung these same metastatic nodules were seen. There was no pneumonia. The bronchial lymph nodes as well as the mediastinal lymph nodes were not involved. The parietal pleura was greatly thickened and studded with numerous metastatic masses. The heart was normal in size. Valves and heart muscle were normal and the blood vessels were normal. The liver was normal in size and there was no involvement by tumor growth. The kidneys, pancreas and suprarenals were normal. The right ovary contained a carcinomatous mass. The uterus and tubes were normal. The mesenteric lymph nodes were moderately enlarged and on section the larger ones were found involved by the carcinomatous growth.

Brain and Spinal Cord.—Brain; There was a tumor on the inner surface of the dura pressing on the left cortex. The tumor was about 3.2 cm. (1¼ in.) in diameter. It was situated above the Sylvian fissure and on the posterior upper part of the inferior frontal and the lower posterior part of the middle frontal and on the inferior part of the post-central and of the anterior central gyrus (Fig. 1, B).

A larger tumor, 6.4 cm. (2½ in.) in diameter, on the base of brain extended from the left frontal region posterior to the orbital plate (Fig. 1, A). This tumor mass had involved the bone in the immediate vicinity. Both tumor masses had indented the brain tissue by their constant growth.

Spinal Cord.—The spinal cord from the fourth cervical vertebra to the cauda equina was much compressed by a metastatic growth which extended along the dura mater spinalis. The vertebræ in several places were infiltrated and spongy by infiltration of the growth. The nerve roots were involved, especially in the upper dorsal region, by carcinomatous infiltration.

Microscopic Examination.—The skin nodules showed carcinomatous characteristics. The nodules in the lung, pleura and lymph nodes were also carcinoma, and the tumor of brain and spinal cord showed carcinoma.

Anatomic Diagnosis.—Secondary general carcinomata of brain, spinal cord, lungs, ovary, skin and vertebræ.

The larger of the two tumors of the brain, namely, the one under the frontal lobe of the left side, must have interfered in some way with the higher functions of cerebration. On rehearsing all the symptoms which were displayed during the case, I recall distinctly the odd wit and humor which, even during her greatest paroxysms of pain, the patient often indulged in, relapsing quickly to her former state. This was made much more effective by the contrast of the two conditions and at first seemed uncanny, reminding one of a paranoiac state. I believe that German observers have noted this condition in abnormal states of the prefrontal lobes and call it *"Witzelsucht."* It certainly was present in this case. Did the marked hysterical exaggeration also arise from the same source?

In the progress of such a case as this the so-called consultation is unfair, unwise and illogical. Many important cases thus are lost to later discussion and dissection simply because in a consultation, held at one particular instant of a moving, fleeting series of pictures one sees but one of this series, and that one presenting so many seeming contradictions that the condition naturally is dubbed "hysteria." Everything arising thereafter is complacently put to the credit of this medical scrap heap, and when the patient dies it is of an endocarditis, or a pulmonary edema, or an apoplexy, all arising suddenly and all extremely unexpected. It is only occasionally that one of these cases gets to autopsy, the end having been so clear.

I believe that in neurologic consultations we should proceed somewhat as follows:

The consultant should see the patient as at present, get all the general data from the attendant physician, examine the case and then place it in some general class, without attempting to diagnose it more specifically at that time. He should then instruct the attendant physician, preferably with written suggestions, to continue the observations in a logical manner and to transmit daily reports of the progress along the particular lines indicated. At the end of a week, or at any other convenient time, he should again see the patient, previously armed with the statistics requested, and then finally pass on the case. In the meantime he will have digested thoroughly every phase and can come to a determination in the quiet of his library instead of in the anxious atmosphere of the sick-room. I further believe that this entire procedure should be considered as one consultation. As a result of such methods, I believe we will get far better results than is the case at present, also that there will be fewer cases of hysteria among our history cards.

158 West Ninety-fifth Street.

OPSONIC THERAPY IN SKIN DISEASES.*

H. R. VARNEY, M.D.
DETROIT.

It is now a universal belief that a number of diseases owe their origin to the invasion of the body by specific micro-organisms, and the true etiology of a class of affections of the skin is based on this belief. Hence the most successful treatment has been the application of that which would kill the invading microbe—without injuring the skin structure. The skin is constantly being invaded by micro-organisms which produce disease when the patients are physically below normal, and, to combat these infections more successfully, constitutional treatment has been found necessary.

All this was realized, but until Leischman, in 1902,

* Read in the Section on Cutaneous Medicine and Surgery of the American Medical Association, at the Fifty-eighth Annual Session, held at Atlantic City, June, 1907.

ve to the profession his method of measuring phagocytic activity the progress of the treatment could be noted clinically only. Sir A. E. Wright and his associates, Leischman and Douglas, demonstrated by a series of experiments, based on the theory of phagocytosis, that there are properties in the blood serum which he calls "opsonins." The substances act by chemically uniting with the invading bacteria and so change them that the leucocytes are able to phagocyte the bacteria. These substances do not in any way affect the leucocytes. They are supposed to be specific for each micro-organism, though much remains to be known concerning them. When an infection occurs the relative resistance or the relative opsonic power of the blood is lower than normal.

Although the reports to date have been confusing and unattractive, the fact that we, as clinicians, regard of

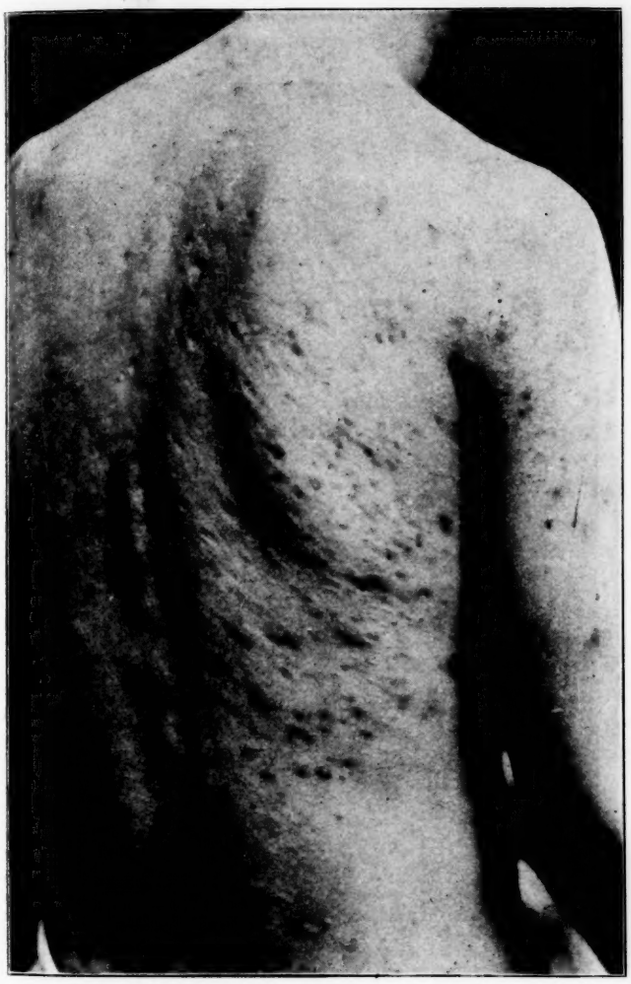


Fig. 1.—Acne vulgaris; before vaccination.

value is that we are given not only a relative means of determining the resisting power of the patient toward an invading microbe, but also a method of raising his resistance by bacterial vaccinations.

More than four years have elapsed since Wright modestly made known his theory and practical results with bacterial vaccinations. Wright has classified diseases due to bacterial infection into three groups; the first only being of special interest to us, as dermatologists, is as follows:

Diseases in which the bacterial process is strictly localized or shut off from the lymph and blood circulation, as acne, furunculosis, sycosis and lupus. In this class the opsonic index is persistently low, owing to the absence of immunizing stimuli.

This lowered resistance may be more or less localized, due to an abnormal condition in the skin structure and its functions, or there may be a general lowered resistance toward a given micro-organism. It is with this class of disease that bacterial vaccinations offer most in permanency of cure. In those due to abnormal conditions, unless these conditions are corrected by accompanying treatment, recurrence takes place.

The localized microbic diseases of the skin furnish the most satisfactory class for the application of this treatment, as the diseased condition may be so accurately observed and the invading micro-organism easily located and there is absolutely no danger to be experienced from inoculations of vaccine made from these bacteria.

It is my intention to present the results of my personal experience in the therapeutic application of bacterial vaccinations, controlled with and without opsonic readings, in a class of chronic, rebellious, localized infections of the skin, due to the staphylococcus pyogenes, including acne-vulgaris, sycosis and multiple furunculosis, and I would hesitate to report them at this time were they not similar to those of earlier investigators along this line.

The principles of this treatment can more readily be understood by referring to charts of selected cases from each group of disease mentioned. They have been carefully observed during the treatment according to prescribed methods. The technic used is that prescribed by Wright and his followers, with a few slight modifications.

1. A pure culture, the causative micro-organism, or, if a mixed infection, the micro-organisms, was isolated. 2. Estimate was made of the opsonic power of the patient's blood to this micro-organism before any vaccination was given. 3. A vaccine was prepared and standardized from the micro-organism. 4. The patient was inoculated with this vaccine, with varying doses at indicated intervals, determined only by systematic estimations of the opsonic contents of the patient's blood. The special technic for measuring the resisting power of the patient, or to discover the opsonic index, is familiar to all and will warrant omission here.

This method of obtaining the opsonic index, that is, estimating the amount of opsonins in the blood, is, as yet, very inaccurate, and can be obtained only relatively, as phagocytic action may be easily influenced in so many different ways. Therefore, to attain to any degree of accuracy during a series of readings, each step of the technic should be taken each day, at the same hour of the day and under as nearly as possible the same existing conditions.

While Wright's method of estimating the resisting power of the blood is a decided advance in medical science and the only fairly accurate means as yet, it is open to many objections, though of unquestionable value as a guide in the therapeutic application of bacterial vaccinations.

PERSONAL CLINICAL EXPERIENCE.

In reporting the results of the therapeutic application of this treatment in a series of about forty cases, twenty-seven of which were dermatologic, I feel that time will permit only a summary of the interesting features of each group of diseases. At present this new theory is

limited almost wholly, in results thus far reported, to chronic, localized infections, and even in these conditions its field of usefulness can be widened by combining it with other methods.

ACNE.

This group included rebellious, long-standing cases, and, in justice to Wright's methods and principles, no other treatment was used, so that a fair test was given them. These patients came daily to the laboratory and their opsonic indices were determined, the average of three readings being taken. These were the results of comparing the patient's blood each time with a normal pool made up of several healthy persons' bloods.

Autogenous vaccinations were then given, the vaccines being carefully prepared and standardized. Experience convinces me that in some of my early cases too large doses were administered. The dose to be selected is one that will cause no constitutional disturbance, only a short negative phase and a prolonged positive phase. The first dose always should be small, because the opsonic rise is often greater after this vaccination than after the second or third. If too large a dose is administered this pronounced rise in resistance will be shortened, and this also shortens the duration of improvement clinically.

With increased opsonic power, which is increased phagocytosis, clinical improvement begins and continues as long as the patient's index stays near or above the normal blood. Whenever the patient's index drops within a point or two of its original mark fresh outbreaks of the disease appear, clinical improvement going hand in hand with opsonic rises. In the treatment of acne it has never been my privilege with other forms of treatment to see or to obtain such rapid improvement as that following the first forty-eight hours after the first vaccination in selected cases. This improvement continues from five to seven days; at that time the patient's index will have dropped down to near its original mark. Generally, with careful readings, we are able to determine when to vaccinate again before a fresh outbreak occurs; or before the index is allowed to drop too low; the object being to increase gradually the patient's resistance and fortify the preceding vaccination by revaccinating.

In an attempt to shorten the technic, seven cases, after indices were determined, were vaccinated with stock vaccine or that made from acne cases similar in type. The positive phases were as pronounced and clinical improvement as encouraging after the first vaccination as in those who were given autogenous vaccinations; yet after a series of from three to five properly-spaced vaccinations the improvement, though great, seemed to remain at a standstill after the third vaccination, and there was not a permanent cure of one of the group.

In a series of five cases autogenous bacterial vaccinations were administered, vaccinations being given when clinical observations showed new lesions, the first three vaccinations being given about one week apart. Four of these cases have been discharged cured, demonstrating that autogenous vaccinations are productive of better results than those from stock vaccines. The only short route, therefore, in the technic is in omitting the opsonic estimations.

Out of a group of twenty-one cases, nine of the most extensive, long-standing cases were given autogenous vaccinations, revaccinations being governed by the patient's opsonic indices. Six have been discharged, cured by this method alone; one discontinued treatment, and with two patients it was necessary to combine other treatment with bacterial vaccinations to obtain a cure.

FURUNCULOSIS.

This group included five cases of multiple furunculosis, three of which were of months' standing. One patient, female, presented fourteen active furuncles on the arms, wrists and hands. These followed an attack of la grippe, which was accompanied by an abscess of the frontal sinus. After two autogenous vaccinations the patient made a complete recovery, no new lesions developing after the first vaccination and the old lesions disappeared rapidly. Another case of multiple furunculosis followed a series of four abscesses about the rectum, with no apparent cause other than lowered resistance. No furuncles or abscesses have appeared since autogenous vaccinations were given.

The third case was that of a man who had had multiple furunculosis of the hands, and also chronic, papular eczema which had existed two years continuously in spite of careful treatment. After three autogenous vaccinations there were no new furuncles, and the eczema has since subsided.

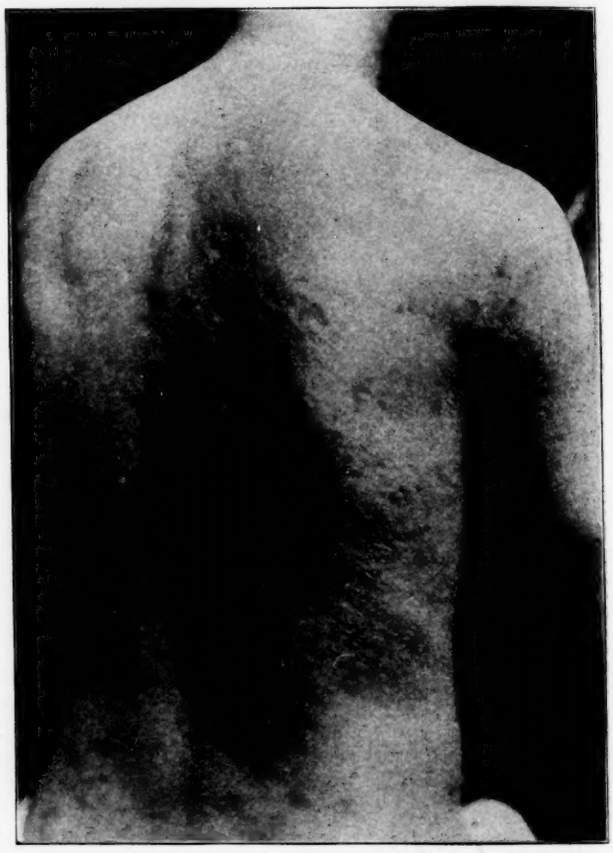


Fig. 2.—Acne vulgaris; after vaccination.

The other two cases in this group responded in equally as gratifying a manner, and there has been no recurrence of the disease after several months, when the patients were discharged. No other treatment whatever was given. In this most troublesome condition to both patient and physician no uniform treatment has been successful. The spontaneous disappearance of furuncles, occurring long after the patient's faith in drugs has been exhausted, may be explained by the fact that Nature prepares by a sudden setting free into the cir-

culation certain bacterial toxins which act as a vaccination, thereby increasing the opsonic resistance of the patient, and recovery results. The mechanical means in bringing this condition about, such as the poultice of an old lady, Bier's passive hyperemia, and the Roentgen ray and Finsen light, all assist in auto-inoculating the circulation with bacterial products, thereby raising the resistance, by increasing the opsonins, when recovery takes place.

SYCOSIS.

In two cases of coccogenous sycosis, that had existed two and six years respectively, the patients were given autogenous vaccinations controlled by opsonic indices. After a series of vaccinations covering a period of ten weeks the first patient became disheartened and discontinued treatment, the disease being only slightly improved. This patient presented a history of multiple abscesses, which necessitated hospital treatment for five months. His resistance to the invading germ was unusually low, so that the opsonic rises were only slight. He was among the first on whom the treatment was administered, and greater experience has taught me that the first doses were larger than those which have since been used with better results. On the administration of 600,000,000 germs the patient's negative phase was most marked and he suffered constitutional disturbances —headache, langor and general malaise. I, therefore, feel that this failure was probably due to too large a dose at the onset.

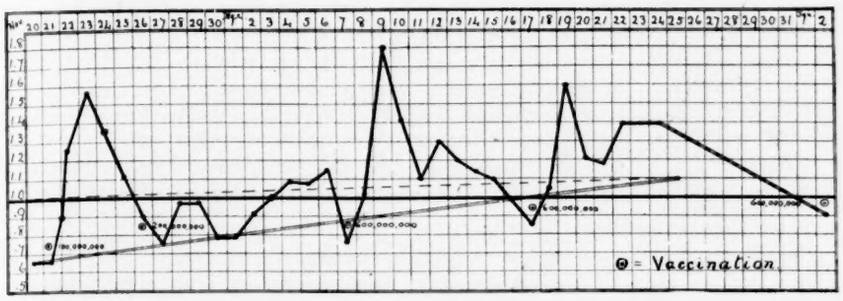


Chart 1.—Acne vulgaris: Solid line, opsonic index; broken line, increase above normal double line, improvement curve.

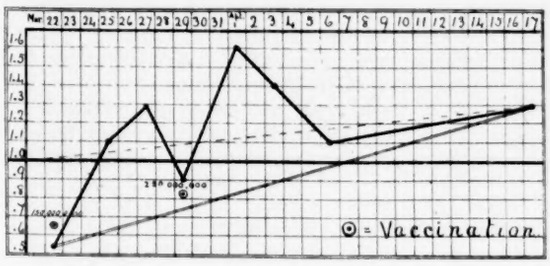


Chart 2.—Furunculosis: Solid line, opsonic index; broken line, increase above normal; double line, improvement curve.

The other patient presented a condition that had been rebellious to all forms of treatment for a period of six years. After a series of five autogenous vaccinations the disease entirely disappeared and the patient was discharged. Following the first dose there was a cessation of fresh outbreaks, and no further activity of the disease was again apparent until the index reached its original point. During the treatments of this patient there was an illustration of the effect of loss of sleep and alcoholic stimulant. This effect was a decided and prolonged drop of the patient's index or resistance.

This same influence on the resistance was shown under similar circumstances in patients who were so treated for acne. Excessive fatigue and menstruation, also lower the index. It is, therefore, most important that patients while receiving this treatment be warned against those things which are decided handicaps to the treatment. The physician should know the physical condition of each patient before he administers a bacterial vaccination so that no vaccination will be given when the resistance is abnormally low.

CONCLUSIONS.

I am convinced that in bacterial inoculations we possess a therapeutic agent with a specificity of great merit. Wright's method of obtaining the resisting power of a patient is also of unquestionable value as a guide to determine what will raise the resistance. Vaccines made from the patients' own invading micro-organisms (or autogenous vaccinations) produce better results than those made of stock vaccines. These results can be obtained with or without opsonic readings, but they will be uniformly better if the vaccinations are controlled by frequent estimation of the patient's resistance.

I believe that proper autogenous vaccination, administered in appropriate doses, when the patient's index indicates the necessity for revaccination, is a harmless, quick and efficient treatment in certain chronic localized infections yet to be classified.

DISCUSSION.

DR. JAY F. SCHAMBERG, Philadelphia, thought that opsonotherapy ought to be of value in a small number of cutaneous diseases, characterized by circumscribed infectious foci in the skin. He has treated seven or eight cases by this method, most of them sycosis or acne. In a case of long standing, rebellious sycosis, there was a striking improvement from the

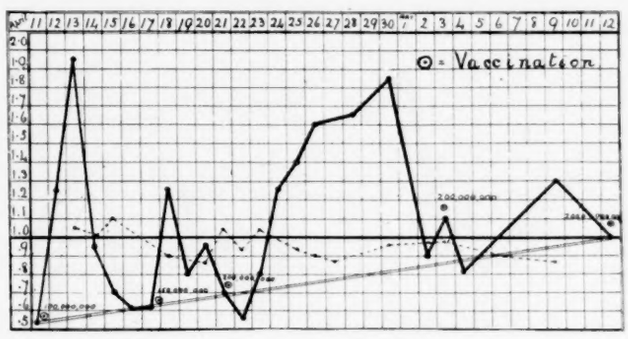


Chart 3.—Sycosis (coccogenic): Solid line, opsonic index; double line, improvement curve.

date of the very first injection, the pustules drying up and disappearing. Two injections were given and a cure effected. In other cases there has been an improvement, although in some of them relapses have occurred. One very severe case of indurated pustular acne has improved somewhat under this treatment, but the improvement has not yet been striking. Despite the successful results obtained by Dr. Varney and others, Dr. Schamberg thought it questionable whether acne in most cases will be amenable to this treatment. The staphylococcus is certainly not the cause of acne. If acne is to be treated by increasing the defensive power of the system and weakening the invading organism, that organism must be used which is really the cause of the disease. Staphylococcic in-

jections in acne may, however, lessen or prevent secondary pustulation. Dr. Schamberg has treated one patient with a papular vesicular eczema, complicated by the subsequent development of pustules and a few furuncles. One injection seemed to effect a cessation of the pyogenic complications and was followed by a distinct improvement in the eczema. Much has been said concerning the actual value of the opsonic index. At present there is great unreliability in the determination of these indices and it is to be hoped that it will in the future be unnecessary to employ them, thus simplifying the technic. He believes the use of the word vaccine to designate bacterial emulsions should be strongly deprecated. Apart from the fact that it is etymologically impossible, the word being derived from "vacca," a cow, it is unnecessary and confusing.

DR. R. A. MCCONNELL, New Haven, Conn., thought it incredible that acne can be benefited by the opsonic therapy without reference to the probable cause of the disease. He has never seen a case of chronic acne cured without a proper regulation of the patient's diet, and he has never seen a case that was not materially helped by proper regulation of the diet. The injection of anything which will raise the patient's opsonic index seems to be with a hope which is not justified.

DR. L. HEIDINGSFELD, Cincinnati, stated that the subject of opsonins as yet presents many technical difficulties which seriously preclude its practical application in general practice. Yet he is convinced that a great deal of useful and practical knowledge will be derived from the studies and investigations which have been achieved in the past and will be carried on in the future. The greatest obstacle thus far encountered is the technical difficulty in determining the indices, and if this feature can be eliminated, or materially modified, it will mark a great advance in the serum and antitoxic therapy of the future. The good which will come from these investigations can well be illustrated by the fact that the opsonic studies have demonstrated that the opsonins must not be injected on a rising index; that the index must first be allowed to rise to its highest point, and reach a period of decline before further inoculations are made, otherwise they are apt to precipitate a falling index, which will continue to fall farther and more rapidly, the more frequently the inoculations are made. This fact was forcibly brought home to him in connection with some ten or twelve cases of lupus, which he was treating some two or three years ago with tuberculin after the method of McCall Anderson. He obtained marked improvement in all the cases for a short time. After four or five injections of tuberculin were given, some of the patients failed to show any improvement and steadily became worse. This continued until fewer and fewer patients responded favorably to the treatment, and he was obliged to withdraw the treatment before a satisfactory result was obtained in a single case. The opsonic investigations led him to believe that he had been injecting the tuberculin too frequently on a rising index, and about six months ago he again reverted to the tuberculin treatment in a number of the same and additional cases, and obtained a marked and satisfactory improvement in every case thus treated by giving a smaller amount of tuberculin and at less frequent intervals. He believes that the further study of opsonins will give a clearer insight into the serum treatment in all forms of infectious diseases, and that it will be of material aid in the evolution of this important field of therapy of the future. He has also achieved excellent results in a few cases of lupus of the skin and tuberculosis of the genito-urinary tract with the new anti-tuberculous serum of Marmorek, and strongly urged its tentative application in this class of affections.

DR. JOSEPH ZEISLER, Chicago, stated that, as long as the technic of the opsonic treatment is as complicated as it is now, laboratory aid is absolutely essential, and this, to a great extent, will prevent the measure from becoming popular for the general practitioner. He hopes that the large laboratories, with the necessary equipment and facilities, will try to give, as soon as possible, stock toxins for injection which can be used in a routine way. If it is necessary each time to determine the opsonic index, the method will remain impractical and beyond the reach of the ordinary physician.

DR. W. H. MOOK, St. Louis, thought the time not far distant when it will be possible to demonstrate that diet has absolutely no influence on the treatment of acne vulgaris, which Engman and he consider to be local. The acne bacillus of Unna-Engman has been demonstrated in a number of cases, and it is along this line that a cure for acne vulgaris will be found. In the St. Louis Skin and Cancer Hospital they are getting cultures of acne bacilli and are working along this line in connection with the opsonic index, and he believes that curative results will only be obtained with vaccines made from cultures of acne bacilli.

DR. M. B. HARTZELL, Philadelphia, said that the most we can say, from the evidence at hand regarding opsonic therapy, is that it is encouraging; the number of cases reported as actually cured is very small as yet. The present method of obtaining the opsonic index is clumsy and unreliable, and stands in the way of a more general adoption of the method. Furthermore, the rise is followed shortly by a corresponding fall, so that the injection must be repeated. Does this mean that the treatment must be kept up indefinitely? Do the injections raise the patient's powers of resistance only temporarily—not permanently?

DR. H. R. VARNEY, Detroit, in reply to Dr. Schamberg's query as to the true etiology of acne, said that, although it is still a disputed subject whether the lesions are due to the pyogenous micro-organisms or to the acne bacillus, his investigations thus far have indicated that, whenever bacilli are present, autogenous vaccines made from a mixed culture are productive of better results than vaccines made from the predominating micro-organism. It is, therefore, most important, before preparing the vaccine, to obtain cultures from several lesions, so as to determine not only the predominating micro-organism, but also what micro-organisms exist. Then a mixed vaccine should be made.

The importance of diet in the treatment of acne is recognized by all. In many of his cases of acne the localized infection was without doubt secondary to other existing conditions, both general and local, and unless these conditions are corrected, recurrence is likely, even though an apparent cure has been brought about by vaccinations. In treating acne, the patient should be made to understand that whenever there is the first evidence of a fresh outbreak of the lesions he should return for a revaccination. In this series of cases reported by Varney, about every seven days the index had apparently dropped, and revaccinations were given. In spacing the first three vaccinations, without opsonic readings, once a week is an average interval; after which revaccinate whenever there are clinical evidences for its necessity. Revaccinations are always given during the negative phase, but it should never be allowed to drop below its original condition. If such a condition occurs, it would be best to wait and allow the patient's index to rise before revaccinating. For the first twenty-four hours after revaccination, a slight negative phase always follows, and if the patient's index is allowed to drop too low before revaccinating, a fresh outbreak occurs. In administering Koch's T. R. we have all realized the deleterious effects of too large doses, and in Dr. Heidingsfeld's cases this was no doubt the reason for the cessation in improvement. Rather than increasing the opsonins in the blood, they were probably exhausted by over-doses, and an increased toxic condition was produced. Much also depends on the general condition of the patient at the time the vaccination is given. It is far better to wait until after menstruation than to vaccinate twenty-four or forty-eight hours before. As to continuing the revaccinations indefinitely, as referred to by Dr. Hartzell, he would say that if the case is one in which bacterial vaccinations will be of value, and the proper vaccinations have been given, the patient will not only be cured, but will be more or less immunized against the invading micro-organism of that particular disease, even though his index gradually falls.

Nourishment.—The number of people who do not get sufficient nourishment is large, not because they have not the means to procure the nourishment, but because they are incapable of taking it, either from lack of appetite or lack of the power of digestion or assimilation. In order to eat well one must have sufficient rest and sufficient life in the open air. —*Journal of the Outdoor Life.*

SIGNIFICANCE AND TREATMENT OF ITCHING.*

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Itching, or pruritus, is an unpleasant sensation which most individuals have undoubtedly experienced at some time, and yet which it is difficult to describe, any more than pain can be described. But all recognize and know that as a sensation in the skin it may be very disquieting, and that it is one often urgently calling for relief; at times also it may be so distressing that the sufferer will submit to almost anything in order to be freed from it, and will frequently claim that any amount of pain would be preferable.

Nature's treatment of itching is by scratching, and in the effort to get relief from intolerable itching animals and human beings, the latter especially, will often indulge in this, even until great injury, followed by much pain, is inflicted on the delicate tissues of the skin, as is especially seen in infants with eczema. But this alleviation is generally only temporary, while the real trouble may be greatly aggravated by the scratching. Fortunately, however, science can come to the aid of the sufferer, and by discovering and removing the cause of the sensory disturbance more permanent relief can usually be effected. I will endeavor to mention briefly and to analyze the causes of pruritus, or itching, which may be connected with and dependent on many disordered and diseased states of the skin and general system, and will also consider some of the measures best suited to reach the different conditions.

Itching, or pruritus, varies greatly in different individuals, partly according to the cause and partly also in proportion to their varying nervous sensibility. It is variously described, sometimes as a creeping or crawling sensation, as of insects beneath the skin, calling for simply mild touching, pinching or rubbing the surface; or it may amount to a deep stinging, pricking or almost burning feeling, urgently demanding severe scratching or even digging into the tissue to reach the seat of the difficulty. Between the extremes of mild and severe pruritus there may be every possible degree of nervous excitation, and the agony occasioned by violent paroxysms of itching, both in infants and adults, is sometimes distressing to witness. In some instances, however, as in mild scabies, the sensation of itching and its relief by slight scratching is said to be rather agreeable; but in the main pruritus is always a disagreeable symptom, and is a clinical sign of something wrong, either in the skin itself or elsewhere in the system; for the healthy subject should be as unconscious of the skin as of the stomach, heart or other organ.

The external signs of itching, largely the result of scratching or rubbing, also vary greatly in different patients, partly according to the nature of the trouble and cause of the pruritus and partly according to the individual affected. Thus the long scratch marks often seen across the backs of those suffering from pediculosis are entirely different from the isolated, scratched lesions seen in another parasitic disease, scabies, and are sometimes almost pathognomonic. In mild, chronic, more or less generalized eczema, there are often long lines left by the finger nails, which are quite different from the separate, torn papules generally seen in urticaria, made by the same means.

But it is often remarkable how few external signs may be presented, even when the patient complains bitterly of the distress caused by itching; this, however, is commonly due to the self-restraint of the individuals, or to the really mild character of the pruritus, which may seem to them greater than it actually is. In many cases, on the other hand, the results of scratching will seem to be out of all proportion to the severity of the exciting cause.

The locality of the itching will also often be a significant feature and contribute to the correct determination of the nature and cause of the trouble: thus, itching on the extensor surface of the extremities would suggest pruritus hiemalis, while itching across the abdomen and upper thighs often indicates scabies or pediculosis pubis, both of which latter are occasionally met even among those well up in the social scale.

The number and variety of different skin affections which may present itching as a more or less prominent feature are so many and varied that it is, of course, unwise to lay much stress on this symptom for diagnostic purpose, for even syphilitic patients may sometimes complain of pruritus. In this latter case, however, there is commonly some other skin condition which will account for it, although occasionally syphilitic lesions will itch more or less.

This emphasizes the necessity of studying carefully the whole of the surface when itching is complained of; one can not be too careful in making an accurate diagnosis in affections of the skin, for lamentable results are constantly met as a result of an erroneous diagnosis, or often from no definite diagnosis at all.

Coming now to the causes of itching we find that they can conveniently be arranged under three general categories: 1, external; 2, idiopathic, and, 3, constitutional Some of these need to be again divided and subdivided, so that the whole subject may be fairly well presented in the following table:

CAUSES OF ITCHING.

1. External	Miscellaneous	Mechanical.
		Toxic.
		Climatic.
	Parasitic	Microbic.
		Vegetable.
		Animal.
2. Idiopathic	Neurotic	Reflex.
		Functional.
	Senile.	
3. Constitutional	Autotoxic	Acute.
		Chronic.
	Dermato-pathologic.	

Let us examine this table a little and briefly consider the various conditions of the skin manifesting itching as related to it.

I EXTERNAL CAUSES OF ITCHING.

Here we find two main groups: 1, Miscellaneous local irritation, and, 2 parasitic, each of which have several subdivisions:

1. Under miscellaneous local irritants there appear three groups, representing very different conditions: (a) Mechanical; (b) toxic; (c) climatic.

(a) Caused by mechanical irritants, we find the irritability of the skin often occasioned by harsh underwear;

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some persons experience much trouble when they first put on woolen undergarments, and some think they can never wear them on account of the itching they excite. Also the itching which most of us have experienced at some time on undressing at night, and the irritation which some will occasionally suffer from after a hot bath or a Turkish or Russian bath.

(b) Under local toxic irritation to the skin we have that occasioned by poison ivy and some other plants, also by poisonous dyes in the underclothing; the itching, often very severe, after the internal use of opium, is really a local toxic irritation, although operating from within.

(c) Climatic effects are seen in pruritus hiemalis, which in some patients will return with each advent of cold weather and continue more or less severely during the same. The effects of heat are frequently seen on the skin in the way of prickly heat, miliaria or lichen tropicus; the itching accompanying this is often very great.

2. Parasitic irritants to the skin may also be divided into three classes: (a) Microbic; (b) vegetable; (c) animal.

(a) Thus far we know relatively little in regard to the effect of microbic elements on the skin, but seborrheic eczema, or dermatitis seborrheica, is commonly recognized as such, and at times may be attended with very considerable itching, and it is more than probable that the ordinary microbes found on every skin may contribute a share of irritation resulting in itching.

(b) Vegetable parasites do not, as a rule, occasion much itching on the skin, but ringworm of the scalp will sometimes itch considerably, while eczema marginatum, which is really a tinea of the crotch and genito-anal region, will generally be attended with an excessive amount of pruritus. And it is very important to recognize the true nature of the disease in this locality, for ordinary antipruritic remedies or those for eczema will be of little avail, while proper parasitic treatment will arrest the itching and remove the trouble promptly.

(c) Animal parasites are well known as exciting agents of irritation of the skin, and first among these to be mentioned is scabies, which is constantly overlooked. Even in the best walks of society one continually finds cases of scabies, which have been long neglected, or treated ineffectually for long periods with internal remedies and mild applications, which are quickly cured by proper local treatment. Pediculosis of the scalp, body and pubis is also occasionally seen in private practice, and often will exist a long time unrecognized, the pruritus persisting until suitable measures are employed. All are familiar with the itching occasioned by the bites or stings of various insects, and must always be prepared to recognize that even fleas and bedbugs may be a cause of itching in persons in the best circumstances of life.

II. IDIOPATHIC CAUSES OF ITCHING.

This group is also divided into two main classes: 1, Neurotic, and, 2, senile, the first of which is again subdivided.

Itching of the skin which seems to be wholly neurotic occurs as (a) reflex and (b) functional.

(a) Reflex irritation of the skin is seen in the itching of the nose, and also often of the anus, from the presence of intestinal worms.

An interesting point comes up here in regard to reflex itching, which is of importance, as it relates to the production of skin lesions by scratching in many cutaneous disorders, and to which I called attention some years ago.[1] This refers to the reflex excitation of the sensation of pruritus in a distant part by scratching or pinching in another locality, either for the relief of itching or experimentally at a healthy point.

Among a considerable number of observations extending over some years on my own person, I found that, while this result could not always be produced, it was by no means uncommon to have it occur, and that the reflex irritation or itching occurred almost invariably on the same side of the body to which a greater or less amount of cutaneous stimulation was applied. In this way is explained much of the itching in such a disease as scabies, in which the insects may be located in very few points, and yet excite reflex itching elsewhere, and as a result of the scratching a large amount of artificial eruption may be excited, with pus infection; the same is true of eczema, in which isolated patches will give rise to itching elsewhere, and as a result of the scratching fresh patches will develop; and the same pertains to other eruptions.

(b) Functional irritation is manifested by the well-recognized disease, true pruritus, more commonly generalized, occasionally local, and also, as I believe, also by dermatitis herpetiformis. Pruritus as a disease is independent of local skin lesions, except those occasioned by scratching, and should be clearly distinguished both from true prurigo and also from the pruritus or itching which is a symptom of so many skin affections. Undoubtedly true pruritus may possibly come from many causes which we do not now know, but so far as can be observed it seems to arise independently, it being another expression of nerve disorder, akin to idiopathic neuralgia, which latter may also affect the skin as dermatalgia. The neurotic manifestations of dermatitis herpetiformis are so pronounced and often so severe that I believe we will find its true cause in a nerve derangement, either in the spinal cord or conducting nerves; there will often be intense itching when there are very few or no cutaneous lesions. In a recent case in the New York Skin and Cancer Hospital the itching, which had been terrible, entirely ceased, and the eruption, which was profuse and very characteristic, practically disappeared for several days after a spinal injection of cocain, which was given to produce anesthesia for an operation on inguinal hernia.

2. Senile pruritus stands alone, as a condition probably due to alterations in nerve structure in common with other degenerations belonging to old age.

III. CONSTITUTIONAL CAUSES OF ITCHING.

These fall into two groups: 1, Autotoxic and, 2, dermato-pathologic, or those relating to itching caused by or attending the presence of pathologic changes in the skin, mainly of inflammatory nature.

1. The autotoxic causes of itching may be divided into (a) acute and (b) chronic.

(a) Although some of the cutaneous affections to be mentioned under the next heading have undoubtedly more or less of an autotoxic element, there is one disease, urticaria, which manifests this relation to itching so peculiarly that it is placed especially here. All are familiar with the intense pruritus attending this affection and recognize that, while in many cases it may be impossible to trace its cause to any special article of diet, it is constantly seen in violent form after the ingestion of certain articles of food or drink, and its

1. Clinical Notes on Pruritus. Jour. of Cutan. and Ven. Dis., December, 1887.

autotoxic etiology from intestinal indigestion and fermentation is well recognized.

There is also a mild form of occasional itching, occurring irregularly in many regions, which may be observed in those exhibiting an acid or gouty state of the system. These little itchy points or places are very fugitive, and the irritation readily subsides with a slight amount of scratching; but when the acidity of the system is excessive they may prove to be more severe and persistent and prove decidedly unpleasant, requiring treatment.

(b) Chronic autotoxic irritation of the skin is constantly seen in the intense pruritus of chronic urticaria and that which often accompanies jaundice and frequently occurs in connection with glycosuria. In chronic Bright's disease it is not uncommon to have a considerable amount of pruritus, either persistent or at intervals.

2. Itching due to dermato-pathologic causes, or that which is associated with or dependent on active disease of the skin itself, generally of inflammatory nature, stands prominent among the most distressing and often rebellious forms which are met. And yet the number of these eruptions, which are often attended with much itching, is relatively small, only about half a dozen need be mentioned.

Eczema, of course, comes first, and pruritus is one of the prominent symptoms of the eruption; it may almost be said, without itching no eczema. The severity and character of the itching of eczema, as all know, may vary greatly. At times it amounts to an uneasy tickling, while in some cases with a chronic eruption the intensity of the agony seems sometimes almost beyond endurance. In acute cases the sensations are often spoken of as of a prickling or burning character, as well as itching, and the suffering may be very acute.

Erythema multiforme, during its developing period, is sometimes attended with very severe itching, which becomes more of a burning feeling if bullæ are formed.

Lichen planus is commonly accompanied with considerable itching during its early stages, and chronic patches have also some pruritus, but seldom so severe as in eczema.

Dysidrosis, or pompholyx, causes great discomfort from itching while the lesions are forming deep in the skin, and, indeed, commonly lasts until exit is given to the fluid which presses on the terminal nerves.

Prurigo is always attended with a fierce itching during its entire existence, causing the patient to scratch furiously. But true prurigo is exceedingly uncommon in this country, and need hardly be taken into account; many cases thought to be such prove to be chronic papular urticaria.

The itching attending the healing of ulcerations may properly be placed in this group. The sensation may sometimes be rather severe, and is due to the involvement of terminal nerves in cicatricial tissue before they have become accustomed to their new surroundings.

It will be thus seen that pruritus is associated with very many conditions of the skin of different character, and arises from many different causes. In every instance, however, the real nature of the difficulty is probably the same, namely, an irritation of terminal nerve filaments distributed in the skin. Whether these relate to the finer branches of the nerves or to the tactile corpuscles of Meissner or of Wagner, or the corpuscles of Krause, or Merkel's touch cells, can not yet be determined. It is only known that the skin is most abundantly provided with nerve elements, which when disturbed give their danger signal in the way of itching more commonly than by pain.

An important feature to remember in regard to much of the itching that is complained of is that it is generally spasmodic or paroxysmal in character, and that, in many instances, if self-control is exercised, and if the part is not touched, scratched, rubbed or pinched the unpleasant sensation will cease spontaneously. Hence it is often desirable to inculcate self-restraint, and in the case of infants or some others to employ mechanical restraint, as will be mentioned later; for scratching is known not only to aggravate almost any eruption, but even to be the exciting cause of many of the new lesions, in certain affections of the skin.

But, however much self-control is urged, it is futile to expect that it can be practiced in connection with all diseases of the skin. As patients will tell you, the desire to scratch is at times irresistible, and sensible men and women will say that they would rather die than be prevented from scratching when a very severe paroxysm of itching comes on. The frantic efforts to get relief which are sometimes witnessed would be ludicrous if they were not so pathetic. And I may add also that the frantic efforts of the physician to afford medical relief are also sometimes ludicrous, because they are so pathetically unscientific.

Itching, or pruritus, therefore, should always receive the careful attention of the physician, and every effort should be made to determine the true cause or the nature of the difficulty behind it; for, as already hinted, it is Nature's signal that something is wrong, either with the skin itself or in some portion of the economy. He, therefore, poorly does his duty medically who, when consulted in regard to itching, simply prescribes a lotion, or an ointment, or an advertised remedy, instead of patiently ascertaining by careful examination the true condition of all the skin, and then seeking to determine and reach and remove the real cause of the trouble. How many cases of scabies are scattered through communities by failure to recognize and check the trouble early?

An interesting consideration in regard to itching relates to the well-known tendency to increased trouble at night. The reason for this appears twofold, relating (1) to the condition of the person and (2) to outside influences.

1. By the close of the day a certain amount of nervous energy (of which we know so little) has been expended, and a consequent exhaustion of nerve fiber and power, which is ordinarily renewed by sleep, "Nature's sweet restorer." It is quite natural, therefore, that at that time the exhausted nerves should give their cry of distress at any violence or injury that is done to them by pathologic alterations of the cutaneous structure to which we give the names of various diseases. The terminal nerves are naturally more readily irritated by the effused products of many skin lesions pressing on them, or even by the bites of insects, as in scabies, etc. In the case of idiopathic pruritus, without apparent alteration in the skin, the itching is, as has been before remarked, simply the cry of distress of the debilitated terminal elements in the skin tissue, as a neuralgia is the nerve cry of larger conducting nerves.

As a result of the day's activity the blood is also more filled with the products of catabolism, which are removed by the emunctories during sleep, and which naturally irritate sensitive nerve fibers; as, when there are gross errors of metabolism the brain cells are irritated, caus-

ing dreams, even to nightmare and "night horrors." Bouchard[2] has shown a marked difference between the urine secreted during sleep and that of the waking hours. He states, as a result of his experiments: "What is certain is that during the day the body forms a substance which, when accumulated, would induce sleep, and that during the sleep it elaborates, instead of this narcotic substance, a convulsive substance which, when accumulated, could produce muscular twitchings and induce waking."

Another personal reason for greater suffering from itching at night, as sleep comes on, is found in the subsidence of the higher cerebral functions," whereby the individual loses control of the active powers of the mind and body allowing physical ingrmities to assert themselves. Thus we find rheumatic and neuralgic pains often more severe in the night and itching as well. Moreover, not being occupied with mental or other activity, even the same or a less amount of itching is more noticed and gives greater annoyance by disturbing the equilibrium when one desires to sleep.

2. Outside influences have also something to do with recurrent or increased itching at night. The irritation of the skin caused by undressing and by exposure to the air, which is generally cooler than the surface has been when fully clothed, are efficient causes. Many a patient may be comfortable during the day, but when ready for bed may suffer greatly from itching, which will delay or prevent sleep. These patients will also suffer when warm in bed, partly from a reaction after chilling the surface in undressing, partly from too warm covering and partly from friction incident to moving about. Often patients will get up at night to make fresh applications or dressings, but my constant advice is so to dress and treat the affected parts before retiring that this shall not be necessary; and, if possible, that they shall make any additional applications under the bedclothes so as not to expose the surface again to the chilling effects of the atmosphere.

TREATMENT.

Coming now to the treatment of itching or pruritus, it will be seen that this is a large subject, covering many points, and even reaching far into general medicine. Naturally it can not be expected that the whole ground will be covered, for that would involve the complete treatment of the many different diseases which have been mentioned. There is only time to classify the subject-matter and to direct attention to the lines along which treatment must be pursued, giving some practical suggestions regarding certain points.

Treatment obviously divides itself into: I, Constitutional and, II, local, under each of which heads there are several points to be considered.

I. Constitutional Treatment.—This includes: 1, Dietary and, 2, medicinal, both of which, of course, relate to only a share of the cases, but which should always be borne in mind.

1. Dietary measures certainly are of importance in the class of autotoxic and nervous cases, and also more or less in those of the last class, in which the itching is due to active skin lesions. This need not detain us, for it is based on principles well known to the profession, and which I have often dwelt on at length.

2. The internal medicinal treatment of itching may be considered under four heads: (a) General; (b) neurotic; (c) analgesic; (d) hypnotic.

(a) General treatment naturally does not relate to instances of itching from purely local causes, although even in some of these cases a thoroughly proper general medical treatment will often render the skin less sensitive to local irritants; for it must be remembered that lowered general and nervous vitality predisposes the skin, as any other organ, to disorder and disease. Many a case of dermatitis seborrheica will manifest itching of the scalp or elsewhere on each occurrence of dyspepsia, and prickly heat occurs only when the patient is in a deranged condition of health.

But in regard to a large number of patients complaining of itching, belonging to the last two groups in the general classification presented, internal general or special medicinal treatment is of advantage in removing the systemic or organic difficulty causing the unnatural sensations in the skin. This, of course, relates to the proper treatment of the various diseases attended with itching, and can not be entered on here, but it is hardly possible to emphasize this too strongly.

(b) In neurotic patients general treatment is often of the greatest service and absolutely necessary in many cases, for it must be remembered that, as neuralgia is a nerve cry, indicating a lowered vitality in some portion of the nervous system, so itching may often be a signal of diminished nerve resistance to external or other irritants, calling equally loudly for help. In aggravated or prolonged itching, therefore, great attention should always be paid to therapeutic measures which restore the nervous system to a normal state and maintain it so. Arsenic may sometimes be of value in connection with other remedies, but alone it is powerless to allay itching. The various proper nerve tonics, iron, strychnin, quinin, preparations of phosphorus, cod liver oil, etc., may each and all of them alone and combined be needed in many cases to effect the desired result. Electricity in the form of static or galvanic current is also of value when properly utilized, and *x*-rays are sometimes of value in arresting itching.

(c) Analgesic internal medication at times may be of great value in the treatment of itching, but is also very often greatly abused, especially when employed empirically or without the use of proper measures to remove the cause of the pruritus. It is well known that opium and morphin are worse than useless, for while insensibility to the suffering may be produced thereby they really aggravate the cutaneous irritability and in the end do much harm; if sleep is thus induced the patient scratches while asleep, and on awakening experiences even more pruritus.

In very rare cases a whiff of chloroform has been of service in producing insensibility, so that other measures can act; but in the end, if repeated, this also does harm.

Many of the recent coal-tar and synthetic products have been recommended to give relief from itching, and frequently they will have a more or less beneficial effect; but they must be used with great caution, and frequently the subsequent results are unsatisfactory and even harmful. Many times I have seen cases in which the use of trional had certainly aggravated the real trouble, and I have thought that the same was true after some of the other so-called analgesics which have been used of late years.

Veronal, however, seems to be an exception, and I have used it, often in repeated doses, with good effects, and apparently also without subsequent harm. In a

2. Bouchard: Auto-intoxication in Disease, Philadelphia, 1896, p. 41.

number of cases I have enabled the patient to obtain very satisfactory sleep from repeated doses of phenacetin.

A combination of chloral and bromid of potassium, with a little aconite added, will often act well.

Some years ago I wrote favorably in regard to the use of the tincture of cannabis indica in controlling itching, and if judiciously used it is often of value. I have also advised tincture of gelsemium, repeated every hour or even every half-hour, for three or four doses, and have very frequently seen perfect rest secured by it; I have also given it with other mixtures during the day, with good effect, but once, from an overdose, I had very startling and unpleasant effects, even temporary blindness, produced by it.

II. Local Measures.—The local measures which may be employed with advantage for the relief of itching belong to two classes: 1, Hygienic, and, 2, medicinal.

1. The proper hygienic treatment of a skin affected by itching is very important, and, unless correctly attended to, the condition may not yield even to otherwise good treatment. From long observation I am convinced that many, who have the facilities for it, bathe the skin far too much and often keep up a pruritic state. The normal, healthy skin should have a certain amount of greasy or oily secretion, and when this is too frequently removed by bathing and free use of soap the surface becomes dry and harsh, and its abundant nerves are thereby irritated. Unless caution is given and full directions are insisted on, those in the better classes of society will surely transgress in this particular. Also in drying after bathing, patients will exercise too much friction, and then the overstimulated and excited skin will give occasion for more or less scratching, and the trouble is prolonged in spite of the best treatment. I frequently direct that the skin be dried, whenever a bath is allowed, by soft old hand towels, not ordinary bath towels, a number of them being used, which have been thoroughly heated.

The kind of underclothing is also sometimes of consequence, although I think that its importance is frequently overestimated. I believe that most skins are better with pure woolen garments next to them if the texture is fine and unirritating, although I find that a number do well with the linen mesh undergarments. Cotton is undesirable, and I do not ordinarily favor silk. But I constantly find that if all other treatment is correct, and the skin properly cared for, many persons can wear woolen underclothing who previously thought it impossible.

Restraint from scratching comes properly under this head and is, of course, particularly desirable in the case of infants with eczema. For this purpose I have for many years employed the very simple device of putting the child inside a small pillow case, the head protruding through a hole made in the closed end. This is pulled down to the shoulders, and the arms are secured at the sides by means of several strong safety pins, and one pin is also fastened between the legs, so that the whole wrapping can not be raised. Time and again mothers have expressed the warmest appreciation of this device, which has completely controlled the child, and allowed proper applications to cure the eruption. It is well to remember here, what was previously said in regard to the spasmodic character of itching, that it often ceases if the part is not touched or scratched. A good apparatus has also been put on the market under the name, I think, of "Scratch not;" this consists of celluloid sleeves, to be fastened at the shoulders, which prevent the child from bending the arm and reaching the face. Another patented affair is sold under the name, I think, of "Hold hand," which consists of perforated aluminum balls, into which each hand is placed, with a sleeve attached, which latter is pinned to the clothing. This is also valuable to prevent thumb sucking.

Even in adults it is sometimes necessary to devise means to prevent scratching, such as gloves, etc. I have sometimes tied tape to the wrists and had it passed beneath the back, so that the effort to reach the face, or the other part affected, will waken the patient.

2. The medicinal means which have been recommended at one time and another and used locally for the relief of itching are so numerous and varied that any attempt to classify or even to mention them seems almost hopeless. From the multiplicity and variety of remedies proposed it is readily understood that there is no one single efficient means at our command to stop itching. This, of course, follows from what has been said in regard to the different causes which may produce pruritus. Each case has to be studied by itself and suitable measures employed to combat the real disease present. Carbolic acid alone stands pre-eminent, and when rightly employed is certainly a valuable remedy and is a constant addition to many applications for the relief of pruritus.

The external applications which more or less control pruritus as a symptom may be divided into those which are: 1, Soothing and, 2, analgesic; both of these are used in the form of lotions and of ointments.

The calamin and zinc lotion, so widely known, is one of the best, mild, soothing applications in many pruritic conditions. The formula which I employ is composed about as follows:

R.	Phenol (acidi carbolici)	3ss-3i	2-4
	Pulv. calamin. prep.	3i	4
	Zinci oxidi	3ii	8
	Glycerini	3iii	12
	Aquæ calcis	3i	30
	Aquæ rosæ q. s. ad	3iv	120

M. Sig.: To be sopped repeatedly over the surface.

Ichthyol is a very valuable remedy, and in from 10 to 25 per cent. solution, in water or oil, will often act very efficiently; it is also very valuable in ointments.

The liquor picis alkalinus, which I introduced some years ago, is also serviceable. It is made as follows:

R.	Picis liquidæ	3iv	15
	Potassii causticæ	3ii	8
	Aquæ	3x	40

M.

The potash is dissolved in the water and rubbed up with the tar in a mortar until perfect solution is effected. This is to be diluted in varying strength, one part to ten or to twenty of water, and bathed over the surface, a suitable ointment being applied afterward.

Lead and opium wash is often employed and occasionally will be found effective, but, as a rule, it does not answer so well as other remedies.

Ointments are constantly employed to relieve itching, and if properly constructed and efficiently applied answer well, although often annoying to the patient. For rather mild general itching a carbolized compound lanolin ointment, such as I have often designated "skin food," is valuable, made as follows:

R. Phenol (acidi carbolici)	gr. xx-xl	1	30-2.60
Lanolin	ʒi	30	
Boro-glycerin	ʒiv	15	
Unguenti aquæ rosæ	ʒiii	90	

M.

This is applied with the palms of the hands and gently rubbed in until about all is absorbed.

A mixture of camphor and chloral is a very efficient antipruritic, made thus:

R. Chloral hydrate		
Camphor gum, of each	ʒss-ʒi	2-4
Rub together until liquid and add:		
Compound lanolin ointment (as above)	ʒi	30

M. Sig.: To be gently rubbed in.

If there are any raw surfaces this will sting considerably, but on the unbroken skin it is very comfortable and allays itching greatly.

Many skins do better without any greasy application, and the glycerite of starch can be substituted in the above ointments for the fatty base.

Tar and the tarry preparations, oil of cade and oleum rusci, are also valuable antipruritic remedies, and may be freely used without danger of absorption.

Much more could be given in this same line of local therapeusis, but the object of this paper is not to detail the method of treating itching; it is rather to direct serious attention to the many causes of itching and to the necessity of studying all cases very carefully, and by accurately determining and reaching the cause to give relief to the symptom, itching.

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DISCUSSION.

DR. W. T. CORLETT, Cleveland, O., said that he understood Dr. Bulkley to say that true prurigo is a very rare affection in this country. Dr. Corlett said that he has seen several typical cases of prurigo, as described by Hebra, and, so far as he has been able to observe them in Cleveland and elsewhere, he believes that, if less common, they are quite as typical here as in Vienna. Dr. Zeisler, some years ago, called attention to cases of prurigo seen in Chicago, which, Dr. Corlett thought, were said to be like those observed abroad.

DR. GEORGE T. JACKSON, New York City, remarked that a very severe type of itching is not infrequent at the menopause. Senile pruritus is due not only to changes in the nerves of the skin, but to changes in the skin itself. It becomes thin and dry, and there is an absence of the natural oil, probably due to changes in the sweat glands. These patients sometimes find great relief in simply oiling the skin with cocoa butter.

DR. L. DUNCAN BULKLEY, New York City, said that, in his experience, prurigo differs in different parts of the country. Many cases of supposed prurigo in the Skin and Cancer Hospital eventually prove to be urticaria. Dr. Bulkley said that he has used aspirin, which is supposed to be an anti-icid, and that he agrees in regard to the value of oily applications in certain forms of pruritus. Some of these people bathe too frequently and thus remove the natural oil of the skin; some patients say that their itching is much less troublesome while they are traveling and deprived of their usual baths.

Prevention of Dust.—The Stuttgart Medical Society recently appointed a committee to discuss the question of the prevention of dust and the advisability of a municipal ordinance forbidding the trailing of skirts on the street. The committee report referred to this as unessential, as the automobiles and tramways are responsible for whirling up most of the dust. If the streets are kept carefully cleaned, the report continued, there will be no dust to be set whirling, consequently the measures advised are, prevention of spitting on the street, selection of pavements only after study of their dust producing properties, and warning notices in regard to the dangers of dust to be placarded by the board of health.

INDICATIONS FOR THE EMPLOYMENT OF ADRENALIN CHLORID, IN CONJUNCTION WITH COCAIN, IN OPERATIONS ON THE EYE.*

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BALTIMORE.

For several years, as a matter of routine, I have been employing adrenalin chlorid in conjunction with cocain in many operations on the eye. At first this was done solely to lessen hemorrhage, but for some time I have used it not only for this purpose but because it soon became evident that through its action the anesthetic effect of the cocain was definitely increased.

In operations on the cornea and conjunctiva the anesthesia produced by cocain is, as a rule, so complete as to leave little to be desired, but this can not be said of certain other operations, notably those on the ocular muscles, on the lacrimal apparatus, and those done for the cure of chalazion or other tarsal cysts. Here, where much is to be desired in the direction of more perfect anesthesia, adrenalin has proved of undoubted value.

That adrenalin used in conjunction with cocain facilitates, in a mechanical sense, the passage of probes through the occluded lachrymal duct has not been evident to me, but that it renders the introduction of the probes, as well as the slitting of the canaliculus, less painful is hardly open to question. There can be as little question, I think, that chalazion operations in like manner are made much more tolerable than are those in which cocain only is used.

In tenotomies of the ocular muscles the hemostatic action of adrenalin is of great advantage, though it must be confessed that it does not always as effectually control hemorrhage from the divided tendon as it does from the conjunctival incision. In addition to this effect, however, I am sure that it makes the operation—especially the cutting of the tendon and the manipulations with the strabismus hook—decidedly less of a tax upon the fortitude of the patient.

In operations involving the making of a corneal section, especially cataract extractions and iridectomies, with the exception of iridectomy done during an attack of inflammatory glaucoma, experience has taught me to be rather chary in using adrenalin. For, though I have employed it several times in cataract extraction with no ill effect, I have felt more than once that the operation was complicated by its use. Particularly was this true of one case in which, immediately after the completion of the section, the cornea lost its transparency to a remarkable degree and collapsed in crater-like fashion, the further steps of the operation thereby being rendered decidedly more difficult. In such operations, too, there seems to be no definite reasons for employing adrenalin, since the anesthesia from cocain alone is usually satisfactory.

This last observation does not apply, however, to iridectomies performed for the control of inflammatory glaucoma. Here, as is well known, the anesthesia from cocain is often far from satisfactory. For this reason, and because, moreover, the astringent effect of adrenalin is decidedly helpful, I have preferred to use it under such circumstances. It is interesting to note that Pro-

*Read in the Section on Ophthalmology of the American Medical Association at the Fifty-eighth Annual Session, held at Atlantic City, June, 1907.

fessor Fuchs, of Vienna, has been led by his experience to a similar conclusion.

In operations for pterygium, adrenalin seems to me to be contraindicated, because its blanching effect renders the outlines of the growth difficult of recognition, and, besides, the anesthesia from cocain alone is all that could be wished for.

Dr. J. Elliott Colburn[1] has pointed out another valuable indication for the use of adrenalin in conjunction with cocain. In several cases of ocular traumatism the instillation of adrenalin, by checking hemorrhage, greatly facilitated the detection and removal of foreign bodies which were imbedded in the superficial structures of the eye.

Although I have usually employed adrenalin in full strength (1:1000 solution), and, especially in probing the lachrymal duct, have applied it to the same eye repeatedly and freely, I have never seen any untoward consequences—except such as I have referred to—from its action. I have also found that its sterilization, by brief boiling in a Florence flask, in nowise impairs its efficiency.

There seems to be good authority for the claim that the toxicity of cocain is markedly lessened through the action of adrenalin, but in the eye surgery this is not a matter with which we are much concerned.

In conclusion, I may add that as a therapeutic agent, *per se,* in the treatment of inflammatory conditions of the eye adrenalin in my hands has not proved efficacious.

DISCUSSION.

DR. S. L. ZIEGLER, Philadelphia, said that the conjunctival ischemia caused by adrenalin prevents the absorption of cocain, and thus causes the anesthetic to act more efficiently on the peripheral nerve filaments in the superficial tissues. This enhances the anesthetic value and at the same time prevents the possibility of cocain toxicity, which, although rare, has occurred once in his practice. While its action is most excellent on mucous surfaces, it is occasionally followed by suppuration when injected into the tissues of the lid. He has seen one case of this kind and another where cellulitis followed its use. It may be instilled freely in tear duct cases and in minor operations. It often proves most excellent in iridectomy for glaucoma, and in Saemisch incision, where the anterior segment of the eye is liable to become greatly engorged after the opening of the eyeball is completed. Here it may have slight analgesic effects by preventing this filling up of the vessels. Its effect is manifested somewhat superficially, and therefore incision into the deeper structures is often followed by hemorrhage, as in tenotomies and the excision of small growths. Used in weaker solutions it often relieves the congestion of conjunctivitis, and other mild disturbances. The strength is preferably very dilute, 1 to 16, which is about one dram of the normal strength (1 to 1,000), added to two ounces of water. The long continued use of adrenalin may result in painful ocular irritation, but the weaker solutions do not cause this vascular relaxation so markedly, although this possibility should be borne in mind. Dr. Ziegler said that recently he had been substituting suprarenalin for adrenalin in eye work. It appears to be less liable to septic decomposition, and less irritative to the eye. Suprarenalin is made from the fresh gland and oxidizes more slowly than adrenalin, which is made from the dried gland. Adrenalin, however, acts better in the nose than in the eye, although it is somewhat more irritating to the sensitive tissues of that organ.

DR. C. A. VEASEY, Philadelphia, said that while he fully agrees with Dr. Theobald, he wished to warn against the too free use of the drug in the eyes of patients affected with arteriosclerosis. Three times he has had the misfortune to see the anterior chamber fill with blood shortly after instillation of solutions much weaker than those recommended; if such severe hemorrhage can be produced in the anterior segment of the eyeball, there is no reason why it may not also be produced in the posterior segment. The drug is a good one, and for several years he has been employing it as Dr. Theobald recommends, and it is certainly of the greatest value when it is necessary to anesthetize a markedly inflamed eyeball such as exists in inflammatory glaucoma; but he is also sure that there is a certain class of elderly patients with blood vessels more or less brittle in whose eyes its use should be extremely restricted, if used at all.

DR. JOHN E. WEEKS, New York City, said that he had been using adrenalin for a number of years—in fact, he used the infusion before the adrenalin chlorid was on the market—and he still uses it extensively. He uses it as a routine measure in cataract extractions and has done so for several years, and has yet to see any bad results from its use as he employs it. The cocain anesthesia is commenced some time before the adrenalin is instilled. A solution of 1 to 1,000 adrenalin chlorid is used, one or two drops instilled before the operation. He does not permit its employment for any length of time before commencing the operation, nor does he use it after the operation is begun. He uses it indiscriminately in young or old. One operation in which he does not employ it is that for pterygium, because in this condition it reduces the volume of the pterygium too much. He has found that its continued use as a therapeutic measure is deleterious. There is a relaxation of the blood vessels of the conjunctiva following its continued use even in greatly reduced strengths; there is a dilatation of the vessels and the production of thickening and roughening of the conjunctiva which is not desirable. In not a few cases he has had to tell the patient not to use the collyria that have been prescribed by his colleagues because of the presence of adrenalin. The irritation of the conjunctiva for which it has been prescribed continued and on discontinuing the adrenalin recovery took place promptly. It is a valuable remedy in the treatment of disease of the tearduct.

DR. GEORGE H. PRICE, Nashville, Tenn., said that if the remedy is used to prevent hemorrhage it should precede the use of cocain, and consequently when the object is to reduce the amount of hemorrhage, it is best to use the adrenalin first. It also limits the action of the cocain as to space; prevents too free absorption and carrying away the anesthetic to adjacent tissues. If used in the strength of 1 to 1,000, it must be applied to the point where the effect is desired. If simply dropped into the eye in this strength, and repeated frequently at short intervals, the patient gets a peculiar, dull, heavy pain in that eye, which persists until relaxation of the vessels takes place. In its use about the lachrymal apparatus, he said, it brings about a shrinkage more or less of the tissues, but it should be applied directly to the parts, the tearduct, and not simply dropped into the eye. He uses it when he operates in cases of pterygium, because it reduces the hemorrhage, especially in those fleshy varieties. If used prior to the cocain it reduces liability of hemorrhage and may limit internal hemorrhage. In those conditions where we wish to bring about a lessened amount of blood in the iris tissue itself, he has found it an excellent remedy. He rarely uses it stronger than 1 to 8 in 10,000, except when he wants to use it about the lachrymal apparatus to limit the action of cocain.

DR. SAMUEL THEOBALD, Baltimore, said that he has used adrenalin in the strength of 1 to 1,000 freely. The plan he follows is to instil cocain, then adrenalin, then cocain, etc. Possibly he has used it too freely. He said that the suggestion that it should not be begun too early is a good one and he will bear it in mind. He has never known pain to follow its use. In regard to the added anesthesia from adrenalin, it is in tenotomies that this is especially marked. The conjunctival cutting and the snipping of the tendon are commonly not painful, but the manipulations with the hook are what is apt to produce pain, and this is decidedly lessened by the addition of the adrenalin.

1 Clin. Rev., July, 1901.

Medical Education and Psychiatry.—It is little short of calamitous that American medical education has not equipped the general practitioners to recognize the early symptoms of insanity.—Frank Billings, M.D., in *Charities and the Commons.*

Clinical Notes

GENERALIZED BLASTOMYCOSIS.

REPORT OF A CASE WITH RECOVERY.

JAMES B. HERRICK, M.D.
CHICAGO.

The following case is reported because it is, I believe, the first instance recorded of recovery from generalized blastomycosis. It is worthy of note also that the patient was a woman and of the better class. Blastomycosis in women is apparently a rarity. The patient was under the care of Dr. A. C. Garvy, with whom I saw her many times. This preliminary report is made with the kind consent of Dr. Garvy, who will later present a more detailed history of the case. It should encourage one in the persistent treatment of blastomycosis even of the generalized type, as it shows that a certain percentage, probably a small one, may terminate in healing.

History.—The patient was Mrs. O., 24 years of age, for at least 15 years a resident of Chicago, of healthy, well-to-do parents, and with no severe preceding illness except the usual diseases of childhood, and nervous disturbances, largely hysterical, in 1899. She had been married eighteen months and was the mother of a healthy child three months old, which she was nursing at the time she was taken ill.

April 24, 1904, the illness began, to quote her own words, "with spots like hives and pains like rheumatism." The first lesions were noticed over the left gluteal region. There was no fever at first, at least none that attracted attention, and the general health was not impaired for several weeks. The illness lasted for two years, and during this time there were seventy-nine distinct lesions. These varied in size from those 1 cm. in diameter to areas 8 cm. or more broad. They started as slightly reddish or purplish spots, showing through the skin or felt deep in the subcutaneous tissue. They gradually became more prominent, somewhat hard and tender, and a pseudofluctuation or a genuine fluctuation appearing, the lesions would break through the skin, discharging a thick, yellowish pus, or they would be opened by the physician; in a few instances spontaneous resolution without rupture occurred. After the evacuation of the pus a somewhat indolent granulating ulcer would be left, and there was often an extensive undermining of the skin, with burrowing of the pus. This was particularly marked over the left gluteal region where the deep situation of the abscess and its great size necessitated a drainage operation under anesthesia, which was done by Dr. J. B. Murphy, May 12, 1905. This abscess had its origin in the deeper structures, apparently in the pelvis. The lesions in some instances, as on one of the fingers, destroyed the bone. On healing they left comparatively slight scars that in their parchment-like feel somewhat resembled those of lues. Lues in the husband as well as in the patient was carefully excluded.

Course of the Disease.—The general condition of the patient during the two years of illness varied very materially. Most of the time there was a slight temperature, with occasional exacerbations, when it would reach 102° or 103°. The pulse was generally rapid, a hemic murmur present and the spleen palpable. Early in the illness there was a cough, and Dr. Garvy thought he detected signs of slight consolidation at the right apex. When I saw her I could make out no evidence of pulmonary lesion; at this time there was no cough. The urine showed an occasional trace of febrile (?) albumin. There was marked loss in weight and a secondary anemia. The hemoglobin at one time was as low as 50 per cent; an increase in the leucocytes was commonly present. At the time of the operation by Dr. Murphy the condition was so aggravated that it was thought she would die upon the table. There was generally more or less disturbance of the stomach. At times the pain was extreme and the patient was always decidedly neurotic and even hysterical. This interfered very much with her sleep.

Treatment.—The medication consisted of iodid of potassium, often in increasingly large doses. This seemed to benefit her decidedly, but there was never a complete healing of all the lesions, and the iodid often had to be stopped because of gastric distress occasioned by its prolonged use. The sulphate of copper was tried internally and locally, but with very doubtful benefit. Tonics and sedatives were given as indicated, the latter being of necessity used with a free hand.

Recovery.—In February, 1906, the patient left for California, weighing about 100 pounds instead of her original 130 pounds or more. There were still thirty-one sores on the body. The patient became quieter and less nervous, lived much of the time out of doors, began to sleep well, to improve as regards appetite, and there was soon a very decided tendency to healing of the sores. No medicine was taken after March 23, 1906. In August, 1906, the last sore had disappeared. I have seen the patient several times since and she is apparently, at the date of this writing, July 12, 1907, in perfect health. She writes me under recent date—"I am better now than I have ever been in my whole life, and can endure anything and never have an ache or pain."

Diagnosis.—The diagnosis of blastomycosis was made, not only on the clinical symptoms, including the naked eye appearance of the lesions and the exclusion of other diseases, tuberculosis, syphilis, etc., but by the microscopic examination of the pus from the wounds with a cultural development of the blastomyces. The culture experiments were made by Dr. Oliver Ormsby. The patient was seen at various times by Drs. James Nevins Hyde, Joseph Zeisler and J. B. Murphy. These agreed in the diagnosis of generalized blastomycosis.

IMPORTANCE OF SUPERVISION OF APPARENTLY CURED TUBERCULOSIS PATIENTS AFTER THEY LEAVE SANATORIA.

FREDERICK I. KNIGHT, M.D.
BOSTON.

The proper and satisfactory control of tuberculosis in the future will involve a continued knowledge on the part of some authority not only of the individuals infected, but of their families and all surroundings.

In my opinion, this duty should be assigned not to local boards of health, who would not have the time to devote to it, and sometimes not the interest to do the work thoroughly, but to special local boards, who should gain the desired results with as little publicity as possible. These local boards should be composed of persons really interested in the subject, who should work cautiously and be sufficiently discreet not to create a panic in the local neighborhoods.

One of the functions of such a board should be to supervise patients who, apparently cured, return home from treatment at sanatoria or elsewhere. The better class of patients will usually consult their physicians after leaving the cure, and arrange some hygienic mode of life for the immediate future; but the poorer class are sent out with some good general advice as to outdoor life, employment, etc., but with no idea how to obtain them. It is patients of this class that need to be received at once and guided. In the first place, it should be made sure that they do not go back to an infected house or shop, nor, if it can be avoided, to any unhygienic conditions. This, of course, will include not only the conditions of the home and shop, but also the character and hours of their occupation. Another very important point to be attended to is that they should have proper food, and, without guidance and sometimes help, they may fail to obtain this.

Patients with arrested disease often have a little morning cough, and tubercle bacilli in the sputum. These

should be warned to maintain the same care with this which they have learned in the sanatorium, both on account of the danger to others and also to themselves from reinfection.

Though they may be free from cough and expectoration, and have no physical signs in the lungs, they may have tuberculous glands, bronchial or elsewhere, which, on the occurrence of acute affection or as soon as the vitality of the system is depressed, will reinfect the lungs.

One of the most promising ways of helping to maintain the health of those restored at sanatoria is by the establishment of labor or farm colonies, where gardening, farming, raising of chickens, keeping of bees, cultivation of flowers, etc., can be carried on, with gradually increasing hours and severity of work, under medical supervision. This can be done at some of the sanatoria, where they have land enough, or at special farms devoted to the purpose, like convalescent homes. In fact, many patients could and would be better for doing some work of this kind during a part, or in some cases all of their time at the sanatoria, provided there are grounds enough to set up such régime at the institution.

Woodcock,[1] of Leeds, dwells on the injury to patients from idleness, and gives an account of his investigation of the possibilities of labor colonies. He reports that at Kelling, in Norfolk, at Dr. Fanning's Sanatorium, which is practically a farm, all patients work; even those unable to leave the shelters, carve wood and make mats, and their work is sold. Seven hours is the maximum for work, and three the average. The colony does a large business in eggs and poultry, and the carpenter is kept busy all day making egg boxes. At Kelling they have an "after care" committee, which concerns itself with getting suitable situations for discharged patients. Dr. Fanning spoke enthusiastically of his results. He considers that patients who work five hours a day bring in a profit to the institution of four shillings per week. He had been very successful in obtaining employment for his patients, and sends a circular to employers, offering to take back at once any patients who relapse while in employment. He is not against suitable indoor work. Dr. Fanning believes that idleness is the worse curse to the consumptives.

Boucard, of Cannes, at the same congress, insisted that a part of the millions appropriated for the erection of sanatoria be used in establishing farm colonies, and that, while, as Dr. Panwitz says, nine-tenths of the patients refuse to do the ordinary chores about a sanatorium, they would be glad to learn the care of bees, raising poultry, etc., which would give them suitable occupation when they leave the institution.

1. Congrès International de la Tuberculose, Paris, 1905.

POISONING BY PRIMULA OBCONICA.

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While so much is being written of the dermatitis caused by the brown tail moth and other agents, a narration of the following case may be of slight interest:

The patient was Mrs. R., 59, married, the mother of four children. While in attendance for an attack which proved to be appendicitis, I noticed a suffusion of the face and made inquiry thereto. She gave a history of having suffered from a most obstinate dermatitis for three years, with occasional exacerbations and remissions. Itching and burning were intolerable and at times a severe conjunctivitis was also present. She had consulted various physicians, together with one or two specialists, and had persistently followed the usual course of treatment with salines, ointments, and alteratives, until finally some one had introduced her to the term "dyscrasia," which she had seized avidiously, becoming resigned to her fate. Accompanying her husband on his annual trips to Hot Springs she had each time been free from any irritation, only to have it immediately recur on her arrival home. This fact, together with a similar occurrence on the patient leaving to have an appendectomy performed, led me to believe that the causative factor was within her own household, and although no gastro-intestinal or nervous symptoms were present it seemed to me most likely that arsenic was at the bottom of the trouble. While making an analysis of the wall paper to determine this point, the timely arrival of a nurse, a friend of the family, interrupted all proceedings. She at once descended on Mrs. R.'s eastern window and, selecting one of the handsomest plants therein, declared it was the cause of the difficulty. It was soon banished from the house and no further trouble has ever been experienced.

Primula obconica is a cultivated plant of the primrose or cowslip family and is closely related to *Primula sinensis* (Chinese primrose) seen so commonly among lovers of plants. The flower is lilac or purplish and usually droops. The leaves are radical, apparently springing from the root, the shape being ovatecordate. Innumerable sharp hairs are attached to the leaves and these constitute the irritating-poisonous principle. As in rhus poisoning, susceptibility varies greatly, and, although not positive concerning the point, I believe that in these people actual contact is not necessary.

Removal of Tumor in Hypophysis Through Nose.—H. Schloffer of Innsbrück was recently called on to relieve a patient who presented symptoms indicating a tumor in the hypophysis (pituitary body). The patient was a tailor, 30 years old, who had suffered from recurring headache since 1900, with loss of nearly all his hair, hemianopsia, occasional vertigo and syncope, etc. Roentgenoscopy revealed a tumor, presumably in the hypophysis, and it was removed by turning back the nose to the right, excising the turbinated bones and septum and the inner wall of the left orbit and maxillary sinus and part of the left uppper jaw. The ethmoidal cells were opened and evacuated and the sphenoidal sinus opened. The difficulty was to determine the exact location of the sella turcica. Roentgenoscopy showed the distance from the root of the nose to be 6 cm.; this was computed to represent 5.3 cm. in reality, and a soft friable tumor was found at this point. Nearly the whole was removed with a flexible lead spatula, without injury to the dura. The adherent portions were left undisturbed, possibly a fifth of the entire tumor. The large cavity in the sella turcica was tamponed with gauze dipped in Peruvian balsam, and another tampon was applied to the base of the skull, the ends of both brought out through the nose which was sutured in place. The operation lasted an hour and a quarter, and there was comparatively little hemorrhage. Cerebrospinal fluid dripped from the nose for several days, a drop falling every few minutes, but except for a mild intercurrent erysipelas recovery proceeded rapidly, and the patient was free from all disturbances and clinically cured by the end of a month, with the exception of the persisting hemianopsia. The hair of the beard has sprouted again. The operation proved simpler and easier than expected, and no signs of meningitis developed. The case is described in detail in the *Wien. klin. Wochschr.* for May 23, 1907, xx, p. 621.

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SATURDAY, JULY 27, 1907.

SURGICAL INJURY OF THE PARATHYROIDS.

In 1880 Sandstroem for the first time accurately described the "glandulæ parathyroideæ," and although his report was so thorough that little has since been added to our knowledge of their gross and microscopic anatomy, yet it was not until 1895 that any further consideration was given to these important organs. Since that time articles in plenty have appeared, discussing the functions of the parathyroids and their relation to disease, particularly during the past few years, which have helped to clear up many confused ideas concerning the thyroid as well as giving us positive information concerning the glandules themselves. For a long time the parathyroids were generally considered to be but modified forms of accessory thyroids, with no independent function of their own; and this view is still held by some, although such a position is scarcely tenable in view of the numerous reliable studies which show the anatomic and physiologic individuality of these organs. Gley seems to have been the first to recognize the possibility that the tetanic symptoms that followed total removal of the thyroid were due to the loss of the parathyroids rather than to loss of the thyroid itself, and although much opposition to this view was soon raised, there now seems to be no reasonable question of its correctness. Apparently the developmental and metabolic disturbances following removal or disease of the thyroid depend chiefly on the absence of the internal secretion of this gland itself; whereas the acute nervous manifestations, often with the typical picture of tetany, that may follow operative injury of the thyroid depends on interference with the function of the parathyroids.

Any one who reads the illuminating report by Halsted[1] of his experience with a patient suffering from the effects of operative injury of the parathyroids, will appreciate the absolute necessity of familiarity with these minute and deeply-hidden organs by every surgeon who attempts to operate on the thyroid, and, furthermore, he will be ready to concede to the parathyroids a physiologic function which is peculiarly their own. Halsted's patient was operated on for the removal of the right lobe of the thyroid for a growing goiter, the left lobe having been removed two years previously for the same condition. Although in both operations every precaution was taken not to remove the parathyroids, yet in the second operation the right lower gland was injured by the knife. The resulting symptoms, as graphically described, were impressively violent and characteristic, but were promptly, although incompletely, relieved by administration of beef parathyroid by mouth. At the end of a year the patient was still an invalid, with what may be called a condition of "cachexia-parathyreopriva."

According to Halsted, the tetany which follows operative removal or injury of the parathyroids is becoming a more frequent occurrence, because of the frequent radical operative intervention in exophthalmic goiter. When total excision of the thyroid was practiced for the cure of ordinary goiters operative tetany was comparatively common; then for twenty-five years little was heard of it, as operators abandoned total thyroidectomy; but now, with the prevalence of operative treatment of exophthalmic goiter, in which loss of parathyroid tissue seems to be poorly sustained, the condition is being frequently observed. Probably tetany results in many cases without the parathyroids having been removed along with the thyroid, simply because of interference with their circulation during operative manipulations, hence avoidance of excision of the glands is not a guarantee of safety from tetany. Furthermore, it would seem that, at least in some patients, injury to even one of the parathyroids (there are usually four) may lead to evidences of postoperative parathyroid insufficiency, and Halsted advises very careful avoidance of the tissues in their immediate vicinity.[2]

Administration of parathyroid tissue does not seem to compensate fully for loss of the function of these organs, although it is undoubtedly of value. Possibly in the future it will be found practicable to implant parathyroids, this having been once done with good results by von Eiselsberg[3] in a patient with operative tetany of twenty-seven years' duration. Halsted has, on several occasions, transplanted back into remaining portions of the thyroid parathyroids whose nutrition had been cut off or imperiled during partial thyroidectomy. He believes that the spleen will be found a suitable site for implantations of parathyroids, its vascularity affording exceptional nutrition for the grafts, as Payr first pointed out.

1. Amer. Jour. Med. Sci., 1907, cxxxiv, 1.

2. Plates showing the common location of the parathyroid, as well as an excellent résumé on their anatomy and function, will be found in an article by R. L. Thompson, Jour. Med. Research, 1906, xv, 399.

3. Wiener klin. Woch., May 23, 1907, 645.

PATHOLOGY OF DREAMS.

Whether or not we shall accept the explanation that sleep is due to brain anemia is one of the questions that is still obscured in the physiologic psychology of the future. Sleep still maintains much of its mystery in spite of scientific advance. Dreams have not lost their occult character entirely, notwithstanding all the progress that has been made in psycho-physics and the re-

lated sciences. One thing seems sure: dreams constitute a manifestation of intellectual life and require the exertion of a certain amount of brain force or mental energy. As far as possible, then, they are to be avoided. Every one knows how tired one is who arises after having dreamed much during the night and, on the contrary, how recuperative is dreamless sleep. It is well understood that the reason why an excess of sleep, instead of being restful to intellectual energy, is rather exhaustive, is that, after a certain amount of sleep, even though the body continues to be somnolent, the mind awakes and, in the midst of the undirected, rapidly varying mental excursions which follow, as much nerve force and mental energy is expended as would be necessary for the more continuous thinking of regular intellectual work.

In spite of this harmfulness of dreams and dreaming, there is a definite tendency in the present day to cultivate habits of mind which rather encourage their frequent occurrence. It is a well-known fact that the telling of dreams tends, by impressing their details on the mind, to bring about a reproduction of similar spontaneous mental divagations during the sleep of subsequent nights. Listening to the tales of the dreams of others is said, at least, to have the effect of producing dreams. Children are especially affected in this way, and there seems no doubt that many of the illustrated supplements of our Sunday newspapers, which are gotten up more especially for children than adults in recent times, cultivate the tendency to dream. Artists find it easy to let their imaginations run riot over the many curious things that occur in dreams and these, luridly colored, are presented to children on Sundays and conned over with an avidity that every one knows, though not every one bewails. If this supplement is working harm to the already much worn nervous systems of our American children, it is time to call public attention to it.

An editorial in a recent number of *The Independent* (New York) recites the fact that some physicians are inclined to think that one of the reasons why "night terrors," which are really over-vivid dreams, are likely to occur more frequently on Sunday and Monday nights, is only partly because children are apt to be more tired on these nights after the freedom of the day, but at least partly because they have been recently indulging in the imagination-intoxicating colored supplement with its horrors and its dream suggestions. Although there are notable exceptions, the majority of these pictures are such that no particular good can be expected from their study by the young, while the possibility of harm seems very clear. Elements like this in the education of children often mean even more than the formal factors of school work in their effects on the nervous system. The main effort of parent and physician must be to keep children's imaginations from running riot and exhausting vital nerve energy. Children might just as well become interested in a better class of pictures and would find quite as much attraction in them if only they told a story.

In general it may be said that, in both adults and children, the cultivation as far as possible of dreamless sleep is an ideal to strive for. Many neurasthenic patients would suffer much less from the tired feeling which is always so prominent a part of their symptoms, especially in the morning hours, if there was not that partial wakefulness during the night which is indicated by the tendency to dream. The mental side of therapeutics for these cases would involve a deliberate curtailing of any indulgence in reading or gazing at pictures which might tend to increase dreamfulness. This is as important an adjunct to the treatment of such patients as the cutting off of stimulants, tea, coffee, drugs, alcohol and the like, as may disturb their nervous systems. As a matter of fact, the reading habits of most nervous patients need quite as much supervision as their dietetic habits. This is a matter which has not always been appreciated, but which completes the rational therapeutics of these cases and which is especially valuable in both adults and children, because it constitutes a valuable addition to the most important and helpful side of practical medicine—prophylaxis.

A NEW CUTANEOUS REACTION IN TUBERCULOSIS.

It sometimes happens that in a person who has already been vaccinated successfully against smallpox revaccination will give rise to definite reactions within twenty-four hours. This observation led von Pirquet[1] to look for a similar precocious reaction in other infectious diseases. He has found that if tuberculin is introduced into the skin of a tuberculous child there will appear at the point of inoculation a small papule not unlike the papule of vaccination, at first bright, later more dark red, and lasting about eight days. A small quantity, about two drops, of diluted tuberculin (old) is placed on the skin and a small scarification is made with a sterile lancet right through the drop. Von Pirquet has made 500 tests and obtained a positive reaction in nearly all the cases of clinical tuberculosis in infants. It was not absent in any case of miliary tuberculosis, or of tuberculous meningitis in the last stage, or in infants markedly cachectic. The most characteristic reaction was obtained in cases of tuberculosis of the bones and glands. The reaction possesses diagnostic value principally in the case of patients in the first year of life, and here it may prove of great value in the diagnosis of tuberculosis.

Vallée[2] has studied the reaction in animals and found that in healthy cattle, horses and guinea-pigs there is no reaction after scarification as described. In tuberculous animals the reaction is positive and distinct in twenty-four hours after the inoculation. The phenomenon consists in an edematous infiltration of the part scarified,

1. Berl. klin. Wochschr., May 20, 1907.
2. Compt. rend. Acad. Sciences, 1907, 144, 1243.

which swells into a somewhat painful, grayish-red nodule. The lesion increases for a few hours and reaches its maximum of intensity in about forty-eight hours, remaining then quite distinct for four or five days. This cutaneous reaction is not accompanied by any marked changes in the temperature. The reaction appears equally as distinct in cattle affected with recent and discrete tuberculosis as in those with extensive and old tuberculous lesions. It is not distinct in those subjects which received, at the same time as the scarification, tuberculin injections hypodermatically, but it appears rather well-marked in animals which previously received tuberculin subcutaneously and without any difference whether one or several injections had been given. Vallée has also obtained satisfactory results in a series of cases of glanders.

These are the bare facts so far available. No doubt further observations will add much to the results already at hand. As yet no very serious attempt appears to have been made in order to supply a satisfactory theoretical explanation of the phenomenon, which may be regarded as indicating an increased degree of sensitiveness of the skin to infectious material on part of those suffering at the time with actual infection by the corresponding microbe. Undoubtedly much use will be made of this reaction in the study of various infectious diseases, and the outlook promises interesting developments.

A LESSON IN MALARIA PREVENTION.

When there is a jump in the number of cases of typhoid fever in any locality, the health officer at once proceeds to look for its cause, which, under ordinary circumstances, it is usually easy to find, and the spread of the disease is checked. This would have been deemed impossible a half century ago, and looked scarcely more than a bright dream even a generation ago. Now we have come to realize the real cause of malaria, yet the old doubts that used to exist with regard to the possible limitation of typhoid are prone to have a place, and people can not be quite persuaded that the malaria statistics are as well under the control of health officials as those of typhoid fever. A rather striking example of how much can be accomplished by watchfulness and proper command of such resources as are necessary to prevent the spread of malaria can be obtained from an incident in the sanitary history of Panama during the past spring. At the beginning of March, as during the preceding weeks, an average of five cases of malaria a week were reported at Forty Mile Camp in the Pedro Miguel, where the average population is something under 750. About the middle of March, however, the number of reported cases of malaria increased suddenly to twenty in the week. The conclusion was at once reached that there was some collection of stagnant water in the neighborhood which was breeding mosquitoes of the anopheles type and which needed looking after. After a few days, the inspector found what he was looking for in the shape of an old scow left over from the days of the French in Panama and which had been completely overgrown by the tropical forests in its neighborhood and so had escaped notice. This was at once emptied of water, and the larvæ of the mosquitoes destroyed. At the end of three weeks the number of reported cases dropped again to less than five, and the mosquito theory as the sole source of malaria and its possibilities in modern sanitation was once more vindicated, while another lesson in disease prophylaxis had been quietly given to the world.

TAXING HOSPITALS.

Hospitals that receive pay patients are subject to taxation in Illinois, according to a recent judicial decision. In other words, any institution that takes any support other than from taxation must be fully taxed, no matter how much of its service is given gratuitously to the public—a single paying patient makes all the difference. There is apparently no provision for any reduction for the amount of charity work done. This will be a very inconvenient addition to the already heavily burdened budgets of many of these institutions. The rank injustice and bad public policy of thus taxing the charitable institutions, which are themselves founded to relieve public burdens, is evident, but that is seemingly not a consideration to legislators and officials. In fact, a very respectable proportion of the members of the medical profession give the larger part of their services gratuitously to their needy fellow-citizens, even in states and municipalities where they have to pay a heavy occupation tax for the privilege of thus working for the public. There is no other profession that is thus doubly taxed, but we submit to it and it is perhaps good for our souls, though its temporal disadvantages are obvious. Private hospitals that are run for profit or to accommodate a profitable practice may justly be taxed like any other property, but those that are mainly supported by private endowments and contributions and that receive charity patients to an appreciable amount have a right to demand public support, at least to a proportion of the extent to which they relieve public burdens, instead of being taxed in addition. In many states such a ruling would find few public general hospitals exempt. How much the public charges would be increased if the community had to depend on the exempted hospital alone is a subject for the imagination.

NOISES AND THEIR SUPPRESSION.

A proposition that will receive cordial endorsement of medical men has been made to arrange for "zones of quiet" in our large cities, in the neighborhood of hospitals, etc., where the ordinary and extraordinary street noises will be hushed and invalids and nervous individuals be relieved from their constant irritation. The idea is an excellent one; the trouble is that it not more generally practicable. Many of our city noises are needless and should be suppressed; others are almost unavoidable and their general suppression out of the question. As cities grow, care may be taken to divert traffic and noise-making factories from the vicinities of hospitals, and further to locate new institutions so that the problem of noise can be controlled perpetually.

PHIMOSIS AND CONSTIPATION.

Phimosis has been incriminated so often as a reflex cause of remote disease that it seems almost unnecessary to refer to it anew. A recent study of Witzenhauser[1] refers to a rather important effect of phimosis which may be overlooked, as it occurs in very young children, and as it is not associated in the mother's mind with any urinary disturbance. This author states that he has been consulted by mothers in a number of instances with regard to small boys in whom the main symptoms were obstinate constipation with cramps, great restlessness, and, as a result, gradual deterioration of the general health. When the mother was questioned as to urinary disturbances she generally denied their occurrence, answering that the child urinated very freely. Witzenhauser found in many such patients that the constipation was associated with great dilation of the bladder from phimosis, with a retention overflow, and as a secondary result pressure on the bowel with constipation. Circumcision quickly removed the cause and likewise the symptoms.

THE THERAPY OF WORK DENIED.

The enforcement of idleness among the inmates of charitable institutions will be the result of a recent decision barring the inmates of Illinois state charitable institutions from manufacturing articles to be used by these institutions. It should be remembered that the employment of such persons is not so much of economic value as it is a necessary remedy for their diseases. The danger of a slight disturbance of the market or competition with free labor should not be allowed to interfere with the proper treatment of disease. As *Cooperation*[2] remarks, the same logic would prevent the culture of vegetables, which furnishes opportunity for health-giving out-of-door work. Our contemporary very pertinently says: "It seems a pity that a legal technicality must make us overlook the mountain of benefit, to see only the tiny molehill of harm in the system. If it is the law, the law should be changed."

Medical News

COLORADO.

New Society at Lamar.—The Prowers County Medical Society was organized July 4 at Lamar and a constitution and by-laws adopted. The following officers were elected: President, Dr. J. S. Hasty; secretary-treasurer, Dr. Elmer E. Bartelt, both of Lamar.

Personal.—Drs. Bernard Oettinger and Samuel D. Hopkins, Denver, have been appointed examiners in lunacy to the County Court of the City and County of Denver.——Dr. Solomon Kahn, Leadville, was thrown from his buggy July 7 and seriously injured.——Dr. Henry L. Richardson, Colorado Springs, has been appointed coroner of El Paso County, in the absence of Dr. D. B. Laws.

CONNECTICUT.

Investigate Tuberculosis.—The general assembly has authorized Governor Woodruff to appoint a commission of nine to investigate the prevalence of tuberculosis in the state.

Personal.—Dr. S. J. Goldberg, Hartford, has been appointed assistant to Dr. Lyman at the Gaylord Sanitarium for Tuberculosis.——Dr. Frederick Powers has been appointed health officer of Westport.——Dr. Charles F. Congdon, Salem, fell from a ladder recently and was rendered unconscious, but escaped serious injury.

Mortality for June.—The secretary of the State Board of Health reports 1,211 deaths during June. This was 118 less than in May and 37 less than for the corresponding month of last year. Two cases of smallpox were reported during the month and two of cerebrospinal fever. Infectious diseases were reported as follows: Measles, 327 cases in 45 towns; scarlet fever, 108 cases in 30 towns; diphtheria, 120 cases in 33 towns; whooping-cough, 66 cases in 25 towns; typhoid fever, 39 cases in 25 towns, and tuberculosis, 36 cases in 22 towns.

DISTRICT OF COLUMBIA.

Personal.—Dr. Reid Hunt sailed for Europe, July 19.

Health Report.—The mortality report for the week ended July 13 shows the effects of the continued hot weather, especially in deaths from diarrheal diseases among infants. The total deaths from this cause during the week were 35; of this number 31 were among children under 2 years of age, and of these 17 were colored. There were 75 deaths among the colored population, equivalent to an annual death rate per 1,000 of 40.5. Some of the principal causes of this heavy mortality among the colored population were: Diarrheal diseases, 17; heart diseases, 6; kidney diseases, 5; pneumonia, 5; apoplexy, 4; influenza, 3, and typhoid fever, 2. The principal causes of death in the general mortality were: Diarrheal diseases, 31; heart diseases, 17; kidney disease, 12; apoplexy, 8; tuberculosis, 8; pneumonia, 7; infantile convulsions, 2; typhoid fever, 2. The death rate among the white population amounted to 16.5 per 1,000. A classification of the total mortality as to age shows 48 deaths under one year, and 68 between the ages of 20 and 69, inclusive.

ILLINOIS.

Personal.—Dr. Rosalie M. Ladova, Chicago, was thrown from a buggy at Winona Lake, Ind., and sustained a Pott's fracture; she was taken to St. Luke's Hospital. She sustained no internal injuries, as was reported.——Dr. Carl H. Rembe, Lincoln, sailed for Europe July 16.

Chicago.

The Week's Health Bulletin.—Seasonal advice on typhoid prophylaxis is contained in the bulletin of the Chicago department of health for the week ended July 20, 1907. It calls attention to the fact that each year in August there is an increase in typhoid fever and that investigation shows that about one-fourth of all Chicago cases are contracted in the country where the victim has been spending his summer vacation. Warning is therefore given against the use of polluted water from lakes, streams and infected wells. Care should be taken also regarding the use of milk, ice and raw vegetables.——The deaths for the week ended July 20 numbered 500, equivalent to an annual death rate of 12.37 per 1,000. The July death rate promises to be a low one. During the first twenty days of the month the annual death rate was 11.86 per 1,000 of population. The lowest rate previously recorded in thirty years was 11.95 in July, 1904.

INDIANA.

Personal.—Dr. Wilfred Manwaring, head of the department of pathology in the Indiana University, sailed July 14, to spend two years in research in European laboratories, under the auspices of the Rockefeller Institute for Medical Research, New York City.

Tuberculosis Dispensary.—On July 10 the Indianapolis City Dispensary opened its turberculosis department under the direction of Dr. Edward F. Kiser. The consulting room will be open every afternoon between 4 and 6 for tuberculosis patients.

Communicable Diseases.—On the petition of the business men of Whiting, Dr. J. N. Hurty has made an investigation of the typhoid epidemic which is said to exist in that city.——It is reported that Cromwell has an epidemic of scarlet fever and that public meetings have been prohibited.——Logansport is now said to be free from smallpox.——In the settlement near Arthur 19 cases of smallpox were discovered July 9.——Five well-developed cases of smallpox were discovered July 8 in Monroe Township.——The board of health of Laporte has notified parents that no children will be admitted to public or parochial schools of the city without a certificate of vaccination signed by a member of the board of health.——Smallpox is reported near a camp-meeting ground in Randolph County, near Jay County.——Three cases of smallpox are reported in one family at Salem.——Seven cases of smallpox are reported in Hamilton County.

1. Münch. med. Wochschr., May 28, 1907.
2. Cooperation, July 13, 1907.

IOWA.

Hospital for Mason City.—The physicians of Mason City are organizing to erect a hospital which will cost from $40,000 to $60,000. They expect to secure the cooperation of the sisterhoods at St. Paul and Dubuque to aid in the project.

Medicine Venders Must Be Licensed.—At the request of the State Board of Health, the attorney general has given an opinion as regards licensing of itinerant physicians. The board has no option in the matter and must issue a license when the applicant has complied with all the requirements of the law, but advises the board that it is warranted in going to the extreme in the question of satisfying itself that the applicant does comply with the law. The applicant must have a physician's license before he can obtain a license as an itinerant, and furthermore must satisfy the board as to his competency and morality.

KENTUCKY.

Fresh Air Home.—Forty children from Louisville are enjoying the country at the Fresh Air Home for Children, established at Camden. Dr. Irvin Lindenberger has been appointed physician and will visit the home three times a week.

Vacations.—The following Louisville physicians have gone abroad for their summer vacations: Drs. J. Garland Sherrill, Lewis S. McMurtry, Joseph M. Mathews and Samuel G. Dabney.——Dr. Henry E. Tuley has gone to Lake Cisco, Mich., and Dr. Charles W. Hibbitt to northern Michigan on a fishing trip. Dr. James S. Chenoweth spent part of June and July in Nova Scotia.

Appointment of Physicians.—Acting on the suggestion of the mayor of Louisville, recently appointed by the governor, the Jefferson County Medical Society selected a committee, composed of the president, Dr. S. J. Meyers, and Drs. William Bailey and John J. Moren, to confer with the mayor in regard to the appointment of a health officer and superintendent of the City Hospital. At this meeting also four additional delegates were elected to the state association meeting in October, the county society at present being entitled to eight delegates.

MARYLAND.

Personal.—Dr. William D. Corse, Gardenville, is reported convalescent after being struck by lightning and rendered unconscious, July 18.——Dr. Jackson Piper, Towson, is seriously ill.

State Society Meeting at Jamestown.—The Medical and Chirurgical Faculty will hold its semi-annual session at Jamestown, from September 11 to 13. A boat has been chartered to carry the members down, and the total cost per member will be $15.

College News.—The following changes are reported in the faculty of the University of Maryland: Dr. Charles W. McElfresh, professor of clinical medicine; Dr. Walter H. Mayhew, lecturer on histology and embryology; Dr. Irving J. Spear, lecturer on neurology and psychiatry; Dr. William H. Smith, instructor in clinical medicine; Dr. John H. Smith, Jr., assistant demonstrator of anatomy and presector to the professor of anatomy; Dr. J. W. Pierson, assistant demonstrator of anatomy. The fees of the medical school have been raised to $150.——Drs. Stephen H. Watts, resident surgeon, and Harvey B. Stone, assistant resident surgeon, of the Johns Hopkins Hospital, will reorganize the Medical School of the University of Virginia and found a large clinic at Charlottesville, modeled after that of the Johns Hopkins Medical School.

Baltimore.

Vacations.—Dr. G. McLane Tiffany is at Manchester-by-the-Sea, Mass.——Dr. Clement A. Penrose is at Siasconset, Nantucket Island.——Dr. John W. Chambers is at Mount Clemens, Mich.——Dr. Edward L. Mellus is spending the summer at Dublin, N. H.——Dr. Joseph T. Smith is in Europe.

Personal.—Dr. William G. MacCallum sailed for Europe July 16.——Dr. Henry M. Fitzhugh has moved to Westminster.——Dr. J. H. Hartman was badly bruised and narrowly escaped serious injury on South Mountain, near Hagerstown, recently, when the brake on his automobile broke on a steep hill.——Drs. J. Frank Crouch, William W. Ford, Henry O. Reik and John Ruhräh sailed for Europe July 18.

MASSACHUSETTS.

Personal.—Dr. Augustine L. Chase, Randolph, has been reappointed a member of the State Board of Registration in Medicine.——The governor has nominated Drs. Arthur T. Cabot, Boston; William D. McFee, Haverhill, and Albert C. Getchell, Worcester, as trustees of the three state tuberculosis sanatoria to be established.

Jewish Sanatorium.—A meeting of all the Jewish physicians in Boston was held July 11 to organize a medical staff and form an advisory board to cooperate with the Hebrew Ladies' Helping Hand Association in the supervision and maintenance of a sanatorium for Jewish consumptives.

Bequests.—By the will of the late Henry Mulliken, of Boston, Waltham Hospital is expected to receive a bequest of about $300,000.——Francis D. LeCompte has given $50,000 to establish a professorship of otology in Harvard Medical School in memory of the late Dr. Walter Augustus LeCompte.

MICHIGAN.

Off for Europe.—Dr. Emil Amberg, Detroit, has gone to Europe.——Dr. and Mrs. Henry R. Harrower, Battle Creek, sailed for Quebec July 12.——Dr. Frank A. Millard, Detroit, sailed for Europe July 15.

Communicable Diseases.—Measles is reported to be epidemic in Vassar and Holland.—Four cases of smallpox are reported from North Plains Township, north of Hubbardstown.——The thirteenth death from typhoid fever occurred in Calumet July 3, and the authorities say that the epidemic is well in hand.

Personal.—Dr. Walter F. Parker, professor of ophthalmology in the University of Michigan, has resigned, and will devote himself to private practice in Detroit.——Dr. Orton Clark, Kalamazoo, has been appointed division physician for the Grand Rapids & Indiana Railroad, vice Dr. John W. Bosman, absent in Europe..——Dr. George F. Britton has been appointed resident physician at Harper Hospital, Detroit.——Dr. Robert B. Howell has been appointed assistant medical superintendent of Wayne County, vice Dr. W. B. James, resigned.——Dr. Howard Osborn, Detroit, has become a member of the staff of the Eastern Michigan Insane Hospital, Pontiac.——Dr. C. T. Newkirk, assistant surgeon, M. N. G., and in charge of the hospital corps of Bay City, has been placed on the retired list.

MINNESOTA.

Do Not Wish Names Mentioned.—The Blue Earth County Medical Society, at a recent meeting, adopted a resolution asking the press to refrain from mentioning the names of members of the profession in connection with operations, consultations, cases of sickness or professional visits.

Alumni Meet.—At the thirteenth annual meeting and banquet of the alumni of the School of Medicine of the University of Minnesota the following officers were elected: President, Dr. Harry P. Ritchie, St. Paul; vice-presidents, Drs. Jennings C. Litzenberg, Minneapolis, and G. C. Sheppard, Kimball Prairie, and secretary-treasurer, Dr. Herbert W. Jones, Minneapolis.

NEW HAMPSHIRE.

Sanatorium to Close.—The Pembroke Sanatorium for Consumptives has been closed and will hereafter be conducted as a summer resort.

Personal.—Dr. Harold C. Goodwin, Concord, assistant superintendent of the Concord State Hospital, has been elected superintendent of the Albany (N. Y.) Hospital, vice Dr. Simon F. Cox.——Dr. and Mrs. Oswald Maynard, Nashua, have returned after a year abroad.

Trustees Elect Officers.—The trustees of the State Sanatorium for Consumptives, at a recent meeting, elected Dr. Ezra Mitchell, Lancaster, president; Dr. Samuel R. Upham, Claremont, vice-president; Charles G. Sheed, Keene, clerk, and Dr. Irving A. Watson, Concord, treasurer.

Hospital Notes.—The corner stone of the Laconia City Hospital was laid June 28, with appropriate ceremonies. The building, when completed, will have cost more than $30,000.——The Littleton Hospital, work on which was begun late last summer, was dedicated June 27.

NEW JERSEY.

Typhoid in Insane Hospital.—It is reported that more than 50 cases of typhoid fever, with several deaths, have occurred in the State Hospital for the Insane at Trenton since April 1, and that the epidemic is due to the insanitary condition of the institution. Dr. Henry Mitchel, secretary of the State Board of Health, has submitted a report on the conditions existing in the hospital. Dr. Mitchel gives as the probable cause of the epidemic the pollution of a spring from which the hospital receives its drinking water. He intimates that the sanitary conditions of the institution are very bad and due to neglect by the authorities. A thorough investigation is to be made.

NEW YORK.

Personal.—Dr. Ida C. Bender will attend the International Congress of School Hygiene, to be held in London, August 5-10, as Buffalo's official representative. An endeavor will be made to have the next congress meet in Buffalo.

Public Health Defense League.—The Public Health Defense League of New York City, which is doing excellent work in exterminating charlatans, abortionists and their kindred, has opened a branch in Buffalo and many physicians and laymen are enlisting in this good work.

Products of State Hospitals to Be Reported Monthly.—Governor Hughes has approved the bill of Senator Armstrong providing that the proceeds of the sales of the manufactures and products of the state hospitals be reported monthly to the State Treasurer by the State Lunacy Commission.

Milk Commission Appointed.—The personnel of the recently appointed milk commission of the Medical Society of Monroe County is as follows: Drs. Richard M. Moore, Rochester; Lewis W. Rose, Rochester; Paul D. Carpenter, Pittsford, and John R. Williams, Rochester, who is secretary of the commission.

Smallpox.—A case of smallpox developed in a clerk employed in a railway office. He was taken to the Quarantine Hospital, Buffalo, which has half a dozen patients.——At present smallpox is epidemic in Erie County. The health commissioner has ordered several small towns quarantined and has forbidden them to send milk to Buffalo.

Oleomargarine at Coney Island.—Through the activity of the State Department of Agriculture residents of boarding houses and patrons of restaurants at this popular resort will be spared from further consumption of oleomargarine. One arrest has been made and the offender held for General Sessions under $500 bail. Further arrests are expected. Although the federal government permits the sale of oleomargarine under proper license, the State of New York absolutely pronibits it.

Polluting the Oswego.—The State Health Department, in its bulletin, announces that it has informed the public officials of the municipalities in the Oswego River watershed that it will hereafter require that no sewage shall be discharged into any of the waters of the Oswego River without preliminary treatment. The degree of purification required by the health department will depend on local and other conditions affecting the public health and comfort of the residents who dwell in the vicinity of these streams or receive their water supplies from them.

Conference of Sanitary Officers.—Dr. H. D. Pease, director of the State Hygienic Laboratory, visited Buffalo to make arrangements for the coming convention of the New York State Conference of Sanitary Officers, which will bring 1,200 sanitary officers to Buffalo, October 14-19. The conference this year will be the largest of its kind ever held in America. A new state law compels every village and township to pay the expenses of its health officer to this gathering, and that will mean that over 1,200 will attend. Governor Hughes will address the body. All questions relating to public health will be discussed and the meetings will be open to the public. Experts from Washington, Chicago and New York will address the conference on the subjects of tuberculosis, pure milk, water filtration, sewage disposal, child labor, tenement-house problems and other topics. One of the features will be the tuberculosis and hygienic exhibits which illustrate what is done by New York state for the treatment of tuberculosis. Miniature tuberculosis camps will also be shown.

New York City.

Hoffman Island Improvements.—Governor Hughes approved the bill appropriating $20,000 for improvements at the Hoffman Island quarantine station.

Scores Prostrated by the Heat.—July 17 and 18 were the hottest days of the year and kept the ambulances and surgeons busy. When night fell at Coney Island more than 5,000 men, women and children were sleeping on the beach.

Personal.—Dr. and Mrs. Harold Barclay and Dr. and Mrs. John H. Claiborne sailed for Bologne and Rotterdam, July 17.——Dr. George A. Taylor sailed for Plymouth, July 18.——Nathan Straus has gone to Europe to attend the second international milk congress at Brussels in September.

Spreading Knowledge of Tuberculosis.—The reverse side of the transfers used on the various surface lines in this city contain, on certain days, instructions to consumptives and the addresses of the various tuberculosis dispensaries. The privilege is a courtesy from the business firm which usually advertises there.

Bequests.—The will of Isidor Wormser, the banker, gives to Mount Sinai Hospital and the Hebrew Orphan Asylum $2,500 each; to the United Hebrew Charities Association, $2,000; to the Home for Aged and Infirm Hebrews, the Montefiore Home for Chronic Invalids, the Roman Catholic Orphan Asylum and others, 1,000 each.

Contagious Diseases.—There were reported to the sanitary bureau for the week ended July 13, 413 cases of tuberculosis, with 170 deaths; 514 cases of measles, with 29 deaths; 361 cases of diphtheria, with 31 deaths; 274 cases of scarlet fever, with 15 deaths; 49 cases of typhoid fever, with 12 deaths; 35 cases of whooping-cough, with 5 deaths; 16 cases of cerebrospinal meningitis, with 9 deaths, and 37 cases of varicella, a total of 1,699 cases and 271 deaths.

Consumptives' Boat.—Moored at the dock at the foot of West Sixteenth Street, on the North River, is the old Staten Island ferryboat which is now used as a day camp for consumptives. Patients are sent to the boat after being examined and passed by the doctors in charge of the Associated Tuberculosis Dispensaries. They remain on board until 5 o'clock, when they return to their homes. During the day they are given from three to eight eggs, and from three to eight glasses of milk. They supply themselves with other food, except coffee, tea, bread and butter, etc. John A. Bensel, commissioner of the department of docks and ferries, is a helpful ally.

OHIO.

The Unfortunate.—Dr. Henry A. Tobey, formerly superintendent of the Toledo State Hospital for the Insane, is seriously ill at his home in Toledo.——Dr. Abraham M. Kyser, McComb, is still ill as a result of a fall several months ago at Bluffton.

To Establish Tent Colony.—Dr. Albert Faller, physician to the Branch Hospital for Consumptives, Cincinnati, acting in the interests of the Anti-Tuberculosis League, has invited all the organizations of the city to establish tent colonies on the new hospital grounds for the treatment of their members suffering from tuberculosis. The Central Labor Council, on behalf of the trades unions of the city, immediately accepted the invitation and will at once establish and equip two large tents, adding others as they may be needed.

Illegal Practitioners.—C. A. Detmering, Lorain, charged with having practiced osteopathy without having taken out a license in compliance with the law, was found guilty, June 22, and fined $30 and costs.——Ed Pfeiffer, Columbus, known as the "German doctor," was found guilty of the unlawful practice of medicine, June 26. Sentence was suspended pending a motion for a new trial.——Carey S. Ferris, an irregular practitioner of Cleveland, on July 4 was deprived of the right to practice in Ohio by the State Board of Medical Examination and Registration.——Information has been filed in the Probate Court of Toledo by the public prosecutor against George Halbman, who describes himself as an expert herbalist and centaur doctor, charging him with practicing medicine without a license.——Emil Justin Rose, Columbus, has secured an injunction temporarily restraining the State Board of Medical Examination and Registration from examining witnesses against him or revoking his license.

PENNSYLVANIA.

Contract Practice Prohibited.—At the regular meeting of the Montgomery County Medical Society, held in Norristown, May 22, a resolution was adopted which compels each member to give up all contract work, including lodge and society work. Members who continue to do contract practice are to be expelled.

Philadelphia.

The Alvarenga Prize.—The Alvarenga prize of the College of Physicians of Philadelphia, for 1907, has been awarded to William Louis Chapman, M.D., Providence, R. I., for investigations on "Postoperative Phlebitis, Thrombosis and Embolism."

Bequests.—The will of the late Edwin C. Weaver bequeaths $1,000 to the Children's Aid Society and the Northern Home for Friendless Children. A provisional bequest of $5,000 to the Pennsylvania and Episcopal hospitals is also contained in the will.——The will of the late Caroline Wolf bequeaths $200 each to St. Vincent's Orphan Asylum and St. Mary's Hospital, and $100 each to the Red Bank Sanatorium and to the society to protect children from cruelty.——By the will of the late Patrick McNulty the Little Sisters of the Poor receive $1,000.

Personal.—Dr. Frederick Dunlop, resident physician in St. Joseph's Hospital, was thrown from the ambulance July 17 and sustained an extensive laceration of the scalp and severe body contusions.——The following physicians have sailed for Europe: Dr. L. J. Lautenbach, July 15; Drs. J. S. Borsch and F. Borsch, July 16; Dr. and Mrs. J. William White, and Dr. L. Webster Fox, July 18; Dr. E. F. Pettingill, July 19.

Heat Prostrations.—As the result of the exposure of many thousands of people to the sun on an unusually hot day, during a parade, July 18, an unprecedented number of heat prostrations were reported. It is estimated that over 3,000 people succumbed to the excessive heat and 4 deaths were reported. The hospitals throughout the city were overcrowded and many emergency institutions were established for the treatment of the victims.

Health Report.—The deaths reported for the week ended July 20 aggregated 499. (It is an interesting point that for the same week 500 deaths were recorded in Chicago.) This is an increase of 31 over the number reported in the previous week, and an increase of 71 over the number reported in the corresponding week of last year. The principal causes of death were: Typhoid fever, 9; pertussis, 4; meningitis, 6; tuberculosis, 62; cancer, 22; apoplexy, 19; heart disease, 33; tetanus, 2; acute respiratory disease, 14; enteritis, 92; Bright's disease, 36; congenital debility, 15; accidents, 24; heat stroke, 4; marasmus, 11, and unknown causes, 15. One hundred new cases of contagious disease were reported, with 12 deaths, as compared with 122 cases and 8 deaths reported in the preceding seven days.

Pure Food Rules.—Dr. Neff, director of the Department of Health and Charities, issued stringent rules July 9 for the government of slaughter-houses and other establishments where meats, poultry and fish are prepared for use as food. He prescribed strict cleanliness and particular attention to drainage, the disposal of offal and ventilation. The employés of these establishments will be subjected to the same rigid inspection as the establishments themselves, and even their physical condition and habits while on duty are to be looked after. Dr. Neff orders that the conveying of dressed carcasses through the streets exposed to view is to be prohibited, and that articles of food, if found to contain coloring matter or preservatives, are to be seized and destroyed. The rules laid down by Dr. Neff are very stringent and if properly enforced will no doubt help to maintain the present good health of the community. They are very stringent and detailed.

TENNESSEE.

Addition to Vanderbilt Medical School.—A hospital ward will be added to the Vanderbilt Medical School to give students practical clinical instruction.

Measles Epidemic.—The health officer of Nashville reports measles epidemic in that city. In spite of the ordinance requiring physicians to report cases, he is of the opinion that the reports include only a small proportion of the actual cases that exist.

Commencement.—The annual commencement exercises of the Medical College of the University of Nashville were held June 28, when a class of forty-one was graduated. The doctorate address was delivered by Dr. Joseph P. Keller, and the degrees were conferred by Chancellor James D. Porter, A.M., LL.D.

Personal.—Dr. Charles P. McNabb, president of the Tennessee Medical College, Knoxville, has resigned after fourteen years' service in that institution.——Dr. Thomas F. Staley, Bristol has returned after an extended trip to China, Japan and Corea.——Dr. William L. McCreary, Nashville, has been reappointed a member of the State Board of Medical Examiners.

TEXAS.

State Health Officer, Not Surgeon General.—The attorney general has handed down an opinion in reply to an inquiry from the adjutant general, that the state health officer is not ex officio surgeon general with the rank of colonel. During the days of the volunteer guard this rank was given the state health officer, but under the present organization of the National Guard it does not obtain.

Personal.—Dr. Joseph R. Stuart, Houston, has resigned as a member of the State Board of Health.——The following have been nominated as members of the Board of Health of Dallas, Drs. Jesse M. Pace, John O. McReynolds, and Samuel E. Milliken.——Dr. B. O. McLean, Caldwell, has resigned as health officer of Burleson County and Dr. Gause W. Covington, Aspermont, has been appointed his successor.——Dr. Robert L. Hall has been appointed a member of the Board of Health of Terrell.

Hospital Notes.—The Physicians' and Surgeons' Hospital, Hillsboro, has been incorporated with a capital stock of $3,000.——The Del Rio Hospital has been incorporated, with a capital stock of $15,000.——Dr. James G. Boyd, Houston, has purchased the E. P. Turner homestead for $25,000 and will convert it into a sanitarium.——The new addition to Saint Joseph's Infirmary, Fort Worth, erected at a cost of $85,000, was dedicated July 7 with impressive ceremonies. The new building contains 110 rooms, 60 of which are private rooms for patients, and 12 wards, capable of accommodating six patients each.——The contract for the addition of ten rooms and basement to the King's Daughters Hospital Temple was let July 4 for $10,000. The building is to be completed by November 1.

VIRGINIA.

Medical Man Fined.—Thomas B. Bollen, a negro "medicine man" of Danville, was arrested and arraigned in the mayor's court on the charge of practicing medicine without a license, and is reported to have been fined $30 and costs.

Personal.—Dr. Paul B. Barringer, of the Faculty of Medicine of the University of Virginia, has been elected president of the Virginia Polytechnic Institute, and will assume the duties of his new position September 1.——Dr. Douglass Vanderhoof, Richmond, has had the degree of Master of Arts conferred on him by Dartmouth Medical College, Hanover, N. H.

Smallpox in Richmond.—The chief health officer of Richmond, Dr. Ernest C. Levy, announces that gross neglect of vaccination is responsible for the outbreak of smallpox in the city. Of the more than 70 cases of smallpox in the Isolation Hospital during the last year, only one man, about 70 years of age, had been successfully vaccinated, and he when an infant.

Want Tax Removed.—The physicians of the state intend to renew their fight, at the next session of the state legislature, to have the state tax on physicians abolished, on the grounds that the physicians of the state are doing a vast amount of charity work by preventing an increase in the almshouse population of the state, thus enabling those who would otherwise be charges on the state to earn their own livelihood.

Society Meeting.—The annual meeting of the Northern Neck Medical Association was recently held at Hague, when the following officers were elected: President, Dr. Walker; vice-presidents, Drs. Fisher, Newbill and Loren E. Cockrell, Reedville; secretary, Dr. Robert O. Lyell, Warsaw; treasurer, Dr. Walter N. Chinn, Hague, and librarian, Dr. Harrison. Irvington was selected as the place for the next meeting, which will be held December 5.

UTAH.

Personal.—Dr. Joseph Milleron, Salt Lake City, charged with violating the city laws in not reporting two cases of smallpox to the health authorities, was found guilty, but was discharged, as the judge stated that he believed the defendant had done nothing but what he believed to be right.——Dr. and Mrs. Arthur F. Rykert, Salt Lake City, are expected soon to return from Paris.

Medical Quarterly.—The Third Councilor District Medical Society began in July the publication of a quarterly called the *Physician's Bulletin*, which it is hoped will be of more benefit to the society than the circular letter ordinarily issued. The first number gives the regulations regarding the registration of certificates; notice of the first summer meeting; notes of the meeting of the American Medical Association and county medical society; state notes and Third District clippings.

WASHINGTON.

Hospital Notes.—The health authorities of Spokane have arranged to erect a building for the housing of poor consumptives, which will contain accommodation for twenty patients.

Smallpox.—Dr. Phillip Frank, North Yakima, health officer of Yakima County, has found seven well-developed cases of smallpox in Wapato. Of the seven patients, three have mingled freely with other people, and an epidemic is feared.

State Board of Election.—At a meeting in Seattle last week the State Board of Medical Examiners elected Dr. James R. Eagleson, Seattle, president; Dr. George W. Overmeyer, South Bend, vice-president, and Dr. Caspar W. Sharples, Seattle, secretary.

Personal.—Dr. Maurice C. Robins has resigned as city bacteriologist of Spokane and has accepted the medical directorship of the Western Union Life Insurance Company in that city.——Dr. James C. Snyder, Seattle, has returned from Europe.

Less **Influenza Among Indians.**—Dr. Charles M. Buchanan, superintendent of the Tulalip Indian Agency, in a letter concerning a statement in THE JOURNAL, June 15, states that there have been eight deaths on the reservation from influenza in the year and that there have not been 100 deaths from this cause on the reservation during the last five years.

Indians **Ask for Physician.**—The Indians from the Quinault Reservation are making complaint to the government that they are not allowed a physician as provided in their treaty. The agent is not versed in the knowledge of medicine and, although a large drug store is maintained on the reservation by the government, they will not use the medicine because of their doubt of the medical ability of the agent.

GENERAL.

Life **Insurance Examination Fees Restored.**—As we go to press we learn that the Mutual Life Insurance Company of New York has restored the original fee of $5 for its medical examinations. This means that others of the old line companies, which cut their fees some two years ago, will do likewise.

Contagious Diseases in the Philippines.—The health report of Manila shows that no smallpox, cholera or other contagious disease was present during the past semester. This is said to be the first time in the history of the Philippine Islands that such a condition has existed.

Leper **Maternity Hospital.**—The Board of Health of Hawaii is about to build a maternity hospital and nursery at the Leper settlement at Molokai. The plan is to provide a hospital, open to all women of the settlement, and a nursery where infants can be taken at once and cared for, thus removing them from the danger of infection.

Health **Statistics of Havana for June.**—The total mortality of the municipal district of Havana in June, 1907, was 558, with a daily mortality of 18.60, equivalent to the annual death rate of 24.25 per 1,000 inhabitants. The diseases that caused the greatest number of deaths are as follows: Circulatory system, 97; enteritis (under 2 years), 86; tuberculosis, 84; simple meningitis, 43; cancer, 24; congenital debility, 24; acute bronchitis, bronchopneumonia and pneumonia, 21; enteritis (in children of 2 years and over), 17; typhoid fever, 16; cerebral congestion and hemorrhage, 14; Bright's disease, 13; influenza, 8; encephalitis, 6; cirrhosis of the liver, 6; hepatitis, 6; senile debility, 6. No case of acute quarantinable disease was reported during the month.

Society **Meetings.**—The thirty-fifth annual meeting of the Tri-State Medical Association of Michigan, Ohio and Indiana was held in Detroit July 9, when the following officers were reelected: President, Dr. Charles D. Aaron, Detroit; vice-president, Dr. Theo. G. Wood, Angola, Ind.; secretary, Dr. William F. Shumaker, Butler, Ind., and treasurer, Dr. Joseph A. Weitz, Montpelier, Ohio.——The eighth annual meeting of the N. S. Davis District Medical Association was held July 9 in Keokuk, Iowa. The following officers were elected: President, Dr. Charles H. Magee, Burlington; vice-presidents, Drs. Elmer E. Sherman, Keosauqua, Iowa, and William L. Downing, Moulton; secretary-treasurer, Dr. Oscar F. Pile, Memphis, Mo. (reelected), and board of censors, Drs. J. C. Taylor, Hamilton, Ill.; George W. Jones, Keokuk, Iowa, and Frank B. Hiller, Kahoka, Mo.——The twentieth annual meeting of the Medical Society of the Missouri Valley will be held in Council Bluffs, Iowa, September 5 and 6. In addition to the regular program, the visiting physicians will be the guests of the Carnival Association, which gives its annual fair at this time.

CANADA.

Osteopathy in New Brunswick.—The New Brunswick Medical Association is waging war against osteopathy in that province and has started a test case to establish the legal position in regard to its practice in that province.

The **Alberta Medical Practice Act.**—The supreme court of Canada having declared the Alberta medical act *ultra vires* and having reversed the judgment of the supreme court of the Northwest Territories, the Alberta Medical Council will decide whether or not to admit to practice those medical men who registered between the passing of the act and the judgment of the supreme court of Canada.

Death Rate in Montreal.—In the three summer months of 1906 over 1,500 children under 5 years of age died in Montreal. The city annuallly pays $30,000 for the care of contagious diseases, but nothing like that number die therefrom. As the mortality of the present summer bids fair to surpass that of last year, the hygienic committee is waging a spirited educational campaign in an endeavor to stay the present high infant mortality in that city.

Hospital News.—The Alexandra Contagious Diseases Hospital, Montreal, is crowded with patients (48), while the St. Paul's Hospital, which treats the French-Canadians, has but very few (10). French-Canadians object to sending their children to hospitals. The situation is said to be peculiar, as the city has arranged to give each hospital a specified grant per annum, though the Alexandra Hospital does the bulk of the work.——London, Ont., is to have a new isolation hospital at a cost of $50,000. There will be an administration department and wards for scarlet fever and diphtheria patients to accommodate 120 patients. The Ontario government's new Hygienic Institute will be located near this hospital.

Personal.—Dr. Andrew Macphail, editor of the *Montreal Medical Journal*, is in Europe.——Dr. H. B. Anderson, associate professor of medicine in the University of Toronto, has returned from Germany.——Dr. Allan Kinghorn, a graduate of the University of Toronto, 1904, is one of the members of another Liverpool expedition to study sleeping sickness in Africa.——Dr. William Bayard, St. John, N. B., still visits patients, although in his ninety-third year. He is about completing his seventieth year in practice.——Dr. Walter H. Moorhouse, dean of the Medical Faculty of the Western University, London, Ont., has resigned, owing to ill health, and has been succeeded by Dr. F. R. Eccles of London.——Mr. Anthony McGill has been appointed chief dominion analyst at Ottawa.

FOREIGN.

Ninth French Congress for Internal Medicine.—This will be held at Paris, Oct. 17-19, 1907. The principal topics to be discussed are: Treatment of simple ulcer of the stomach; pathogenesis and treatment of exophthalmic goiter; hemophilia.

Personal.—Dr. Edwin Klebs, formerly professor in the University of Zürich, who is now residing in Charlottenburg, has lately celebrated the fifty year jubilee of his doctorate, and has received from the Berlin Medical Faculty an honorary diploma.

Society Meetings.—The Anglo-American Medical Association of Vienna held its last meeting before the July and August vacation, June 28. Prof. Dr. Tandler addressed the society on "Forms of Coadaptation of Organs, with Special Reference to the Liver."——The International Medical Association of Mexico will meet in Monterey, November 18-21.

Study Trip by German Physicians.—The annual excursion of German physicians for purposes of study begins September 1, with an inspection of the Berlin hospitals, after which the participants take a steamer chartered for the entire trip and visit the east sea watering-places as well as Rügen, Wisby in Gotland, Stockholm and Copenhagen, returning to Stettin, September 16. The expense of the journey is about $65.

Fake Writers Blacklisted.—At its meeting last year the German Association of Medical Editors decided to prepare a list of authors, who are accustomed to furnish, for pay, articles recommending new remedies and the preparations of chemical manufacturers. Their articles are neither to be published nor abstracted in the journals of the members of the association. After the most thorough sifting of the evidence, which was made possible by the cooperation of the large chemical manufacturers, a list of this character has now been completed and distributed. The association hopes, through common effort, to eliminate a canker from which the German medical journals and through them, the physicians, have suffered in late years.

LONDON LETTER.

(From our Regular Correspondent.)

LONDON, July 15, 1907.

Hospitals in Great Britain.

Hospitals in Great Britain, as a rule, are in a similar situation as regards funds as are institutions of the same nature in the United States. London hospitals especially appear to suffer from a chronic lack of money. University College Hospital in London has issued recently an appeal for further support, stating that since the beginning of last year, the committee has been compelled to sell over $60,000 worth of stock to meet pressing tradesmen's bills. Few, if any, of the large London hospitals are sufficiently prosperous to keep all their beds going, while some of these establishments are almost in a bankrupt condition.

Prevention of Hospital Abuse in Liverpool.

A conference is to be held by the principal Liverpool hospitals with the object of attempting to prevent the abuse of charity by persons able to pay for medical treatment. The idea of the conference will be to discover whether there be an abuse of charity and, if so, to what extent.

National Conference on Sweated Industries.

A national conference on sweated industries is to be held in Glasgow, October 11 and 12. The matter is one of such supreme importance that it is to be hoped that some effective means of coping with the evil may be suggested.

Cerebrospinal Fever in Belfast.

Cerebrospinal fever in Belfast shows few signs of improvement. The public health committee held a meeting recently, when it was reported that there had been 17 cases of the disease during the week ending June 15, as compared with 13 for the previous week. During the same period 15 deaths occurred.

Sanatorium for Consumption.

The Brompton Hospital for Consumption, the largest hospital in Great Britain for diseases of the chest, has established a large sanatorium near Frimley, some 400 feet above the sea level, sheltered on the north and east by pine woods. The cost of the site, buildings and equipments amounts to $350,000. It is the largest sanatorium in the kingdom, stellate in form, two stories high, and contains 108 beds. The patients are put to such useful work as they are capable of performing and by a system of graded labor, are restored to their full working capacity. In 1906, 110 patients were discharged with "total arrest" of the disease. Of these 93 are at work as against 5 who are not, while 12 have failed to report. Of 21 patients discharged as "much improved," 10 are at work. Of 25 patients discharged as "improved" 10 are at work.

A Tragedy of Tuberculosis.

Dr. J. Macdonald, health officer for Invernesshire, has reported the extinction of a whole family by tuberculosis without anything to explain such extraordinary virulence. A crofter lived in the same house for 21 years and acted as a "beater" or ghillie in the summer season. His family, consisting of himself, wife, five daughters and seven sons, ranging in ages from 2 to 21 years, had always been healthy. In April, 1906, the eldest girl, aged 21, who had been in domestic service, returned home suffering from a suppurating finger. Phthisis developed and she died of tuberculous meningitis, May 26. In November another daughter, aged 14, was found to be suffering from well-marked phthisis. She died Jan. 8, 1907. While she was ill the father began to suffer from cough, and the mother complained of pain in the abdomen and left ankle. Two daughters, aged respectively 10 and 20, also complained of cough, and the baby, aged 2, who was anemic and emaciated, also had a cough. Examination showed that the mother was suffering from tuberculous disease of the ankle and there was reason to suppose that the abdomen was also affected. The father, the two daughters and the baby showed signs of pulmonary phthisis. The baby and the daughter, aged 10, both died Jan. 10, 1907. The father died soon afterward. In March a boy, aged 15, was found to be suffering frmo phthisis. The mother died of tuberculous peritonitis. The following points are noteworthy in connection with this outbreak: 1. There was an entire absence of any family history of the disease on either side; 2. for 21 years the family had occupied the same house and enjoyed good health; 3. the acute onset of the disease and rapid progress in most of the cases. The house was of the rdinary type of crofter's dwelling, consisting of two apartments with stone walls, thatched roof, clay floors and very damp. The people were particularly clean and tidy and kept the house in excellent condition.

Antityphoid Inoculation in the Army.

Favorable results are reported from antityphoid vaccination in the army. The vaccine is prepared after the method of Sir A. E. Wright, its author, but in the light of research work continuously carried on at the Royal Army Medical College in the last two years modifications have been made in a few particulars. A non-virulent strain of typhoid bacilli is used, but the relative value of virulent and non-virulent cultures has not been definitely settled. The bacilli are grown in broth at a temperature of 37° C. for 24 to 48 hours and then sterilized by a temperature of 53° C. This was much lower than the temperature formerly used, which was 60 to 65° C. Experiments have shown that the lower temperature maintained for an hour is sufficient to insure sterility, and that unnecessarily high temperatures seriously impair the efficacy of vaccine. A dose of 500,000,000 bacilli is administered and ten days later a dose of 1,000,000,000. The blood of vaccinated persons shows evidence of higher bactericidal activity than normal and of the presence of agglutinins as long as six years after inoculation, but whether this is sufficient to prevent typhoid fever is not known. The latest clinical observations are as follows: In August and September, 1905, 150 men of the Seventeenth Lancers were inoculated, but of these 23 refused to accept a second dose. The regiment reached India September 28. About the end of October typhoid fever broke out and in the few months following 63 cases were observed. With two exceptions they occurred in the uninoculated portion of the regiment, and both these exceptions were men who refused the second inoculation.

London's Milk Supply.

A conference on the source, surroundings and distribution of milk was held July 1 at the Incorporated Institute of Hygiene, London. Dr. A. W. Mayo Robson presided, and in his opening speech said, in part, that the children killed by poisonous milk would, if they grew up, constitute a large army; the number of those who grow up and suffer from the poison might be counted in our hospitals and prisons. The transmission of tuberculosis by milk has been definitely settled by the Tuberculosis Commission. Typhoid and scarlet fever, sore throat and diarrhea are also transmissible by the contamination of milk. Dr. Thresh proposed the compulsory veterinary inspection throughout the kingdom of all cows whose milk is sold for human consumption, and advocated that veterinary inspectors should have the power to isolate a diseased cow and prevent the sale of its milk, to see that all cow sheds were properly constructed, with proper water supplies, and to serve notices, not only on the tenant as now, but also on the owner. Dr. Carpenter, editor of the *British Journal of Children's Diseases*, said there should be one law for the kingdom, and the local government board should be the central and superior authority. He moved a resolution dealing with a system of annual licenses to dairymen and with periodical microscopic and bacteriologic, as well as chemical examinations of milk.

Therapeutics

[It is the purpose of this department to outline an up-to-date management of disease, to suggest scientific treatment for diseased conditions, and to present prescriptions that are simple, useful and palatable. Prescriptions are written in both the metric and apothecaries' systems, but the amounts of the ingredients are NOT exact translations of one system into the other, but quantities convenient for pharmacist and physician. It should be understood that solids are weighed in grams or fractions of grams, while liquids are measured in cubic centimeters; that a teaspoon holds five cubic centimeters, i. e., more than a fluid dram, hence a 100 cubic centimeter preparation will contain twenty doses.]

The Strength and Purity of Important Drugs.

The necessity for drugs and their pharmacopeial preparations to be up to the standard of strength can not be emphasized too many times.

A brief reference to this subject in Dr. Joseph D. Bryant's presidential address in THE JOURNAL, June 8, 1907, is not out of place when we consider the caution therein contained, viz., that we must know, and it is our duty to know, and the patient pays the physician to know, that the drug he is taking is of the strength and character prescribed. The department of health of New York City has recently ascertained that many times the tinctures and preparations of the most active drugs of the Pharmacopeia are at variance with the Pharmacopeial standard required. If such preparations are too weak they may be useless in the doses ordered. If, for any reason, they are too strong, they may be dangerous. Hence it behooves the general practitioner to see that his prescriptions are filled by druggists in whom chemically, pharmacally and ethically he can rely. It can be no excuse that a druggist offers a tincture of an active preparation which he has bought at wholesale and does not know the strength. He should analyze it and see that it is up to the prescribed standard. If it is not up to the standard, he is criminally negligent.

The Value of Placebos.

While it is often not necessary to write a prescription at the first visit to a patient, it may be necessary to satisfy him or his family with some simple preparation that will in no way modify the development of the objective or subjective symptoms of his disease. Many times troublesome symptoms are present that can be corrected with advantage and without interfering with important symptoms that are awaited or expected. The use of a placebo should certainly supersede any active medication such as quinin, antipyretics, morphin, salicylic acid, or any other active drug unless a diagnosis has positively been made or unless the symptoms calling for some such treatment are acutely present. It is not necessary, as so ably discussed by Dr. James B. Herrick of Chicago in his oration on medicine (THE JOURNAL, June 8, 1907), always to wait for laboratory confirmation of the clinical diagnosis; in fact, it should be remembered that these findings are many times subservient, secondary or confirmatory to careful clinical findings. Careful study and observation of a patient and his history will generally in two or three visits, if not before, clear up the diagnosis of his disease or abnormal condition, especially if combined with laboratory investigations. Until such diagnosis is made, prescriptions that can be translated as instances of "drugging" should not be written. The only prescriptions written should be those which will correct abnormal conditions or which by their very simplicity can be termed "placebos."

Convulsions in Children.

CAUSES.

1. High temperature.
2. Intestinal colic.
3. Anemia of the brain from profound depression, due to profuse diarrhea, inanition, etc.
4. Reflex disturbances (painful eruption of teeth, adherent or elongated prepuce, pinworms or other intestinal parasites, foreign bodies in the ears or nose).
5. Injuries to the head.
6. Cerebral lesions caused by hemorrhages, as from whooping-cough, etc.
7. Epilepsy.
8. Tetanus.
9. Nephritis.

TREATMENT.

1. Strip a child in every case and seek all external reflexes. If any are found, correct them if possible.
2. If the cause is high temperature due to the beginning of any disease, reduce the temperature by frequent (every two hours) tepid sponging and the administration of one dose of antipyrin (5 centigrams, or 1 grain, for every year of the child's age), and a dose of calomel (from 3 centigrams to 10 centigrams, ½ grain to 2 grains). An ice cap should be applied to the head for short periods, but not continuously.
3. If there is gastrointestinal disturbance, a dose of castor oil is perhaps often better than calomel.
4. If the convulsions are due to depression, the body should be surrounded by dry heat, and a few drops of brandy, in water, given every hour, and such warm nutriment as is possible.
5. If there is much nervous excitation, bromid of sodium (5 centigrams, or 1 grain, for every year of the child's age), every two hours until there is sleep.
6. If there is severe pain, deodorated tincture of opium (½ a drop for a child from 1 to 5 years) should be given every hour till sleep occurs or the pain ceases.
7. Repeated convulsions generally require chloroform inhalations, and if persistent, chloral hydrate (5 centigrams, or 1 grain, for each year of the age) given once, and repeated if needed, although the warm bath may be tried.
8. Of course, the subsequent treatment depends on the cause of the trouble.
9. The urine should be examined in every case as soon as it can be obtained.

Injection Treatment of Syphilis.

This method is strongly advocated by Dr. William S. Gottheil, of New York (*New York Medical Journal*, June 26, 1906), and receives support by Dr. W. H. Palmer, of Providence, R. I., (*Boston Med. and Surg. Journal*, Oct. 25, 1906. Abstract in *Merck's Archives*, April, 1907).

Besides "the advantages of the absence of gastrointestinal disturbances, less frequent administration, and less frequent symptoms of mercurialism," the above writers agree on the following: They think the best preparation for injection is a 10 per cent. suspension of the salicylate of mercury in liquid petroleum, as it rarely produces an abscess.

R.	gm. or c.c.
Hydrargyri salicylatis	5
Petrolati liquidi	50

M. Sig.: For hypodermic injection.

½ c.c. = .05 gm. of the mercury.

10 m. = 1 grain of the mercury.

5 m. = ½ grain of the mercury.

This must be thoroughly shaken before using.

The placing of a considerable quantity of an insoluble salt subcutaneously permits of its uniform conversion into a soluble compound with a consequent uniform absorption. Treatment so administered may be given at intervals of four, five or more days. The kind of syringe is not essential, though the "all glass" variety with asbestos packing possesses some advantages. It should, however, be kept for this use and not used for anything else. It is not necessary to sterilize the injection fluid, provided ordinary care is observed in keeping it from contamination. The needles should be of almost 21 gauge, from 1¼ to 1½ inches long, and should be carefully sterilized after using. This is best done by letting them lie in ether or alcohol. The site of injection should be about half-way between the intergluteal fold and a line running parallel to it and dividing the buttocks into halves. The injection should be made on alternate sides, dividing each buttock into three injection sites, and governing the point of the next injection by palpating the tissues, i. e., if a nodule is felt, place the injection in another spot. The horizontal position with the patient face downward is preferable for the injection, as in this position the muscles are relaxed. The skin is cleansed in the usual manner and the needle of the syringe filled for injection thrust in practically its entire length. If this is done rapidly there is almost no pain. The syringe should then be detached from the needle, which should be watched for an instant to see if any blood exuding from it indicates the puncturing of a vein. If not, replace the syringe and proceed with the injection. "Sealing" the injection puncture is regarded as an unnecessary refinement of technic. The first injection should be 5 minims of the above prescription, i. e., ½ a grain (.03 gm.) of the mercury. Two days later this dose should be increased to 7 minims, representing 2/3 of a grain (.04 gm.) of mercury, and four days later the injection should be of 10 minims, representing 1 grain (.065 gm.) of mercury. From this time the average case requires about 1½ grains (.10 gm.) of mercury, viz., 15 minims (1 c.c.) of the solution every seven days. Some cases, of course, require more mercury and some cases less, but the duration of the treatment should be two years.

Dr. Gottheil's article, read at Atlantic City, June, 1907, and the discussion thereon, will appear in THE JOURNAL next week.

Infantile Scurvy.

Dr. L. E. La Fétra of New York, in the *American Jour. of Med. Sciences*, June, 1907, has the following to say:

"Treatment: Only a word needs to be said. The cause is to be removed. We are to stop the use of devitalized food, and to give fresh milk, fruit-juice (orange, grape or pineapple), beef-juice, raw egg albumin and purée of potato, according to the child's digestive capacity. In infants over a year old purée of potato and of green vegetables is especially satisfactory. To discontinue the sophisticated food is often all that is neces-

sary, but cure is more rapid when the fruit-juices are added.

"Scurvy in adults is now almost a curiosity of medicine; it is dying out because understood. Its causes and treatment are recognized by the laws of all maritime nations, so that nowadays the disease is seldom seen even in the great seaports of the world.

"A similar history of infantile scurvy is likely to obtain and only sporadic cases appear almost as curiosities. This will not occur, however, until that distant day when infants are no longer fed on patent foods, but on fresh cow's milk that has been produced under ideal hygienic conditions. We shall still have cases of infantile scurvy until physicians, as well as the laity, realize that heating or boiling milk is not a physiologic but a therapeutic measure. To sterilize milk is often necessary, but it should be adopted rather as a mode of treatment than as a method of feeding; and it should not be continued indefinitely any more than should arsenic, on the ground that it is a special form of food for the nervous system."

The Treatment of Phenol (Carbolic Acid) Poisoning.

Sodium sulphate has been considered an antidote to phenol 30 grams (1 ounce) dissolved in a glass of water and the entire amount administered at once. The stomach should then be washed out with one part of alcohol to three parts of water. If alcohol is not at hand, use whisky and water, equal parts.

As this poisoning causes profound depression, the patient should be put into bed and surrounded by dry heat. A hypodermic of 1/20 of a grain of strychnin sulphate and 1/100 of a grain of atropin sulphate should be given. If there is still depression, 1 c.c. of adrenalin or suprarenalin solution (1 to 1,000) should be given intramuscularly. If the circulation tends to fail in spite of the above, intramuscular injections should be given of a saturated solution of camphor in olive oil, giving a syringeful every half-hour for two or three doses. If the patient revives, the mucous membranes of the throat, esophagus and stomach should be soothed with some demulcent liquid, as milk, egg albumin water, starch water, or cold flaxseed or slippery elm tea.

All emetics and oils are contraindicated. Also the patient must make no exertion for hours lest sudden collapse should occur.

Future complications that may occur are nephritis, gastritis and subsequent stricture of the esophagus or stomach.

Pharmacology

A State Society President on Proprietary Medicines.

In another department of this issue appears an abstract of the presidential address of Dr. William W. Golden, retiring president of the West Virginia State Medical Association. Dr. Golden's remarks on the proprietary medicine question are so apt that it seems advisable to quote this portion of his paper in full. Dr. Golden said:

Inquiry brings the information from all parts of the state that physicians are gradually getting out of the habit of prescribing proprietary medicines indiscriminately. The extent to which this practice has been carried for so many years was a matter of deep regret to some of us. Up to very recently, the druggists' files showed that by far the largest number of prescriptions written called for proprietary medicines, and the shelves of the dispensing physician were largely laden with this class of drugs. As the matter stood, it seemed as if the teaching of materia medica and therapeutics in our medical schools was a mere formality, similar to the donning of a cap and gown at the graduation exercises, and, like them, never to be used again. The detail men of the manufacturers of nostrums became frequent visitors to the physician's office, and their voluminous free literature supplanted on his desk all books on materia medica and therapeutics. Apart from the fact that this tended to blight all ambition for scientific practice, the recent disclosures of the fraudulent character of many of these proprietaries would make one believe that the least to which some of us are to plead guilty is that we have followed the expectant plan of treatment to a much greater extent than we knew.

I care not to dwell on the positive harm which must have come to many a patient from the use of presumably safe nostrums, such as certain antipyretics, anodynes, and hypnotics, which in the light of recent investigation were proved to contain well-known dangerous drugs; the thought of it is sickening. I have preached against this practice ever since I have been in this state, and as early as twelve years ago, in a paper with the title, "The Evils of Proprietary Medication—The Responsibility of the Medical Press," I argued that it was against the financial as well as the clinical interests of the physician to prescribe nostrums. The millions of dollars which the manufacturers have gained from the sale of these nostrums must have come from the pockets of the physician, and if of the patient, the physician was still necessarily affected by it, though indirectly. At that time my knowledge of the affairs of the profession outside of this state was limited, and I presumed that the great extent to which the prescribing of proprietaries was done was peculiar to this state. But when, shortly after the meeting at which this paper was read, I sent copies of it to several journals, the editors of which expressed a desire to publish it (the title of it only being known to them at first), and they were returned to me with the statement that publication was impossible on account of advertising contracts on hand, my eyes were opened to the omnipresence of this evil, and I saw more clearly than ever the effective muzzling under which the so-called independent medical press was laboring. Instead of being one of many thousands who were not using this kind of medication, as I surmised in that paper, I found myself belonging to a very small minority.

As years went on, it looked as if this state of affairs had come to stay. The nostrum manufacturers were fattening fast and were turning the weight of their opulence on the side of further entrenching themselves in the physician's daily practice. The detail men were becoming offensively common and the reading matter of many of our medical journals became a mere appendix to the numerous pages of nostrum advertisements, and this was done in such a way that one was often at a loss to differentiate between what was advertisement and what proper reading matter.

It was at this stage of the evolution of this disgraceful state of affairs that the Council on Pharmacy and Chemistry of the American Medical Association came to our rescue, to the rescue of scientific medicine, and to the rescue of our sick. If the American Medical Association had never done anything else, outside of creating and maintaining this Council, it would have more than earned a claim for its existence. The falling off in the use of proprietaries is directly traceable to the work of this Council and influence of the greatest of medical weeklies on earth, THE JOURNAL of the the American Medical Association. Let us uphold this good work and give the men at the head of it our undivided support to extend this useful work further, and support to withstand the expected attacks made on them by the manufacturers and their press hirelings. In addition to the publication of an account of such proprietaries as are deemed worthy of use, the Council, through THE JOURNAL of the A. M. A., frequently makes public and exposes such of the worthless nostrums, the manufacturers of which are ignoring in their advertising literature the commonest decencies of trade. I recommend that our committee on publication be instructed to publish exposures in our journal in condensed form.

Organic and Inorganic Iron.

An article by Dr. R. Laspeyres of Bonn (*Med. Klinik*, May 26, 1907, page 599), indicates the propriety of placing a higher value on the so-called inorganic compounds of iron than has lately been accorded to them. In the desire to approach the supposed method of Nature in the administration of iron, there has been a tendency to take up with the complex organic preparations, nearly all of which are proprietaries, to the neglect of those simple official preparations, which were estimated so highly in the past, such as reduced iron, Blaud's pills and other ferrous and ferric salts. The numerous synthetic preparations bearing special names, suggesting their close relation to the iron of the blood, as if by that means their efficacy were greatly enhanced, have obscured the official remedies, which proved reliable in the hands of a previous generation. It has been shown that a certain amount of iron must be assimilated in order to achieve the desired results in the

treatment of anemia. Since experiments have shown that inorganic iron is absorbed in the same form as the iron of the food, stored up in the organs, and used when the supply of organic iron is insufficient for the purposes of blood building, the ferrous and ferric salts, including ferrum reductum, Blaud's pills and the official peptonate of iron furnish the most convenient and economical way of supplying iron to the organism. The daily dose of iron, according to Quincke, should be at least 0.1 gm. (1½ grains) of metallic iron, and this makes it difficult or inconvenient to depend on the organic iron compounds to obtain so large a supply. While the ordinary salts contain from 10 to 30 per cent. of iron, as Laspeyres says, the amount found in hematogen, for instance, would require a daily dose of 142 gm. (nearly 5 ounces). Hemoglobin contains about 0.4 per cent of iron and consequently must be given in doses of at least 25 gm. (385 grains) daily in order to reach the amount considered essential for the successful treatment of anemia.

In general, it may be said that the doses of most of the proprietary iron preparations, said to contain iron derived from blood, should be from 20 to 50 times as large as they are to give the requisite amount of iron. These preparations may do good on account of the alcohol or bitters contained in them, but as iron preparations they are largely unsuitable (*ungeeignet*) and superfluous. The matter of expense is not to be altogether overlooked in regard to these preparations. Organic iron preparations are usually expensive, while the corresponding inorganic compounds are very cheap. Laspeyres goes on to say that it is surely justifiable to exclude these factory-made preparations, whether they are called hematogen, hemalbumin, iron wine or what not, from the prescriptions of physicians for the industrial insurance companies as has already been done in Bonn.

Correspondence

A Continent Without an Orphan Asylum or an Orphan.

CHICAGO, July 20, 1907.

To the Editor:—I have just finished reading with unusual interest a little book of one hundred and fifty pages by Catherine Helen Spence on the "State Children in Australia." This little narrative gives an account of the history of the care of the destitute children in Australia, Tasmania and New Zealand. It is written by one of the pioneers in the abolition of orphanages and other means of exploiting destitute children. Since my first acquaintance with this wonderful work in saving children which came through its presentation at the World's Congress in 1893, I have repeatedly presented the subject in the medical journals, incorporating as the motive the figures of the annual reports of the Children's Council of South Australia.

There is no such thing as an orphan in Australia because the Children's Council becomes at once father and mother to the destitute child. He is taken by the police officer to the home of some respectable and experienced woman who at once furnishes the necessary care, food and shelter, and obtains as complete a history as possible. In a day or two the officer and the woman, who acts as agent for the Children's Council, take the child to the children's court, where all the information is made a matter of record and the child is legally committed to the care of the Children's Council. With this order and information the council selects from the many applicants for children from the farmers of the state a home which it thinks most suitable to this particular child. After satisfactory correspondence with the proposed foster home and a satisfactory arrangement in regard to the price of board and other details, the child is sent to this family in the care of one of the traveling officers of the Children's Council. If the child is of suitable age he is carefully instructed in his rights and duties and his relation to the Children's Council and the family in which he is placed to board. Some officer of the council becomes his special preceptor. His stay with the foster family is at first probationary. Personal likes and dislikes are taken into serious consideration. It often happens that a refractory or spoiled child tries two or three foster homes before one is found in which the adoption is successful. Only rarely, so the statistics show, is it necessary to send a ruined and spoiled boy or girl to the reformatory.

As soon as the child arrives at the home of the foster parents he is placed on the same footing as the other children in the family. He is required to do certain chores and learn the ways of the farm. He goes to school and is introduced to the teacher by his preceptor, and any matters in the history of the child relevant to his education or discipline are made known to his teacher. From that time on his attendance and deportment, as well as his scholarship and general culture, are reported at regular intervals to the council by the schoolmaster. The police officer or constable of the community is also made acquainted with the child, and his relation to the state and the foster family. It becomes his duty to report at once any irregularity which may come to his notice and to make regular reports to the Children's Council of the conduct and development of the child. Every community in which children are placed out to board by the council has a voluntary aid society, usually composed of women. The secretary of this society has previously recommended the home of this foster family to the Children's Council, and now undertakes to supervise, in a friendly way, the settling of the child in the home and the adjusting of any minor unpleasantnesses or irregularities occurring between the child and the members of the foster family. One of the officers of this voluntary aid society is an unpaid officer of the council, and is in a position to meet any unusual emergency. The child is also introduced to the official doctor of the community who becomes at once sponsor for the health of the child. He reports on the sanitary conditions and any sickness which he may be called on to attend in the foster family or of the child himself. It would seem that this was a sufficient safeguard to the interests of the child, but at regular intervals he is visited by his preceptor who learns verbally and by observation what the development of the child has been and what his needs are. Jealous neighbors also watch the interests of the child and frequently send anonymous letters giving information which is afterwards confirmed or disproved by open investigation.

The amount paid for the care of the child varies with his age. Nursing children naturally require more care and a higher weekly board is necessary. Until 13 the child is kept at the expense of the state. At that time he is hired out, usually to his foster parents, and continues to work until 18. During the last two years he provides his own clothes. Three-fourths of his wages until he is 16 and afterward a smaller portion is deposited in the postal savings bank. The balance is paid monthly to the child. The wages begin at one shilling ($0.24), board and clothes, and rise to six shillings ($1.44) or more a week.

When the child is of age, or when a girl marries before she is of age, or when a boy wishes to learn a trade or go to school in town, his savings are given to him under the advice and direction of the council. The advantage which these children receive from the home in which they are placed depends very largely on the age of the child when he comes into the care of the council and the character of the surroundings from which he is rescued.

The Children's Council also has the care of the institution in which delinquent and defective children are treated who are not orphans or dependent. The adoption of children under the care of the council is not encouraged. When it is permitted supervision does not cease until the child is mature. Parents who would farm their children out are not permitted to do so except to those who receive a license which costs a shilling a year and are under as strict supervision as that which prevails with orphans. No person who is receiving aid from the state or who is desperately poor can receive a license, and under no circumstances is a woman allowed to take more than one baby. The regulations in regard to feeding and caring for the child are reasonably strict. Discreet, friendly and indefatigable supervision is furnished by the council. No difference is made between legitimate and illegitimate children.

This system has prevailed in South Australia for thirty

years or more, and yet this is too short a time to demonstrate the end result of placing children in the natural surroundings of a home instead of the unnatural and dangerous surroundings of the orphanage. It is a matter of every-day observation that institutional children are physically, mentally and morally poorly adapted to the life of the world. Dr. Ward, who investigated the physical condition of the children in the English parish orphanages (Report of the Bureau of Education for the year 1897, page 230) made a report which ought to shake to the foundation every institution in which children are huddled together and unfitted for life and happiness.

The building of orphan asylums and the huddling together of children without the care, affection and interest of a family, is destructive to the health and evolution of the child and unfits him for independence and usefulness, by robbing him of the essential elements of social development. The death rate in baby farms and orphanages is notoriously high, not because the buildings are insanitary or the feeding inadequate, but because the dangers of contagion are multiplied and maternal care is impossible.

The placing out of children, with or without compensation, with or without adoption, where constant, intelligent and permanent after-inspection is not carried out, is unreliable, unsatisfactory and cruel and is unworthy the effort of the devoted and misguided enthusiasts and supporters of the homing societies.

The punishment of baby farmers, lying-in institutions, cruel foster-parents and other exploiters of children, is far less efficient and far more expensive than an intelligent, humane and alert inspection and supervision. The former cultivates and engenders wrong, ire and hate while it spoils the child. The latter curbs evil, encourages fair play and kindness and saves the child. The former is penal and destructive; the latter is educational and constructive. BAYARD HOLMES, M.D.

The Bactericidal Values of Some Widely Advertised Antiseptics.

DETROIT, July 10, 1907.

To the Editor:—In THE JOURNAL of the American Medical Association, June 29, there appears an article with the above title by F. H. Verhoeff, M.D., and Edward Keith Ellis, M.D., Boston.

In our opinion the article is unscientific; it gives a false impression as to the value of the antiseptics tested and places the manufacturers of these antiseptics in a false light. The only conclusion that a reader of the article, not versed in the testing of antiseptics, could draw would be that the manufacturers have made false claims for their preparations. Had the title of the article been: "The Bactericidal Values of Some Widely Advertised Antiseptics Under Certain Conditions," less fault could have been found with it. It is a matter of common knowledge to those who have given thought to the testing of antiseptics and germicides that under certain conditions they are relatively inefficient, but to conclude from this that they are practically of no value to the practitioner would be entirely erroneous.

We recall that our Dr. McClintock, along with others, as Geppert, Abbott, etc., pointed out some fifteen years ago that under certain conditions 1:1,000 or even saturated solutions of mercuric chlorid failed to destroy bacteria in feces in twenty-four hours, and yet he stated "it is not to be concluded from this that mercuric chlorid is not a valuable germicide."

Without going into any great detail in regard to the article we may say, first, that the method of testing was faulty and not at all comparable to the practical use of antiseptics. They take 1 or 2 c.c. of the solution of antiseptic and to this add a relatively large quantity of the germ to be tested. Now, antiseptic or germicidal action is chemical, the antiseptic is used up in its work, and to expect 1 c.c. of a very dilute solution, in the case of germicidal discs containing 1:1,000 to 1:5,000 mercuric iodid, to destroy a large number of bacteria is without any warrant. No one attempts to destroy a drop of pus with one or two drops of an antiseptic solution, so, in their tests with hydrocele fluid or saturated solution of albumin, to add equal volume of dilute antiseptic to infected hydrocele or saturated solution of albumin is wholly unfair to the antiseptic and not at all comparable to any method that would be used in the practice of medicine. So much for their method.

Now, as to their conclusions and inferences. They state that the culture used was not only very resistant, as it was killed by exposure of one minute to a 1:1,000 solution of mercuric chlorid or to a 2 per cent. solution of phenol; that 90 per cent. alcohol will destroy this organism in twenty seconds; further, that the antiseptics mentioned in the second table, including lysol, cresylone, trikresol, acetozone, creolin, sublamine, etc., do not destroy this culture in two hours when acting in the presence of an equal volume of hydrocele fluid, hence the inference that any average reader of the article would draw, namely, that these substances will not do in two hours what mercuric chlorid or carbolic acid will in one minute. Whereas, many obeservers, competent bacteriologists, have pointed out that a number of these substances are much stronger germicides than either carbolic acid or mercuric chlorid. Any standard work on disinfection, such as Rosenau's, will cite many authorities bearing out the above.

In referring to acetozone the only inference to be drawn from their statements is that these substances will not destroy typhoid fever germs in twenty-four hours' exposure in the strength recommended by the manufacturers, and yet so good an authority as Professor Novy states that acetozone solutions will destroy all non-spore-bearing germs within one minute. He further states somewhere, although just at this time we can not lay our hands on the report, that with acetozone solutions he has a number of times produced an entirely sterile condition in the alimentary canal of rabbits.

In regard to one of our preparations, germicidal discs, they state that the mercuric iodid in these is inactivated by serum. While it is true that the presence of albumin lowers the germicidal value of mercuric iodid, as it does practically any antiseptic, the statement that it is inactivated is false.

Again, they state that 1:5,000 solution of mercuric iodid requires over thirty minutes to kill the *Staphylococcus aureus*. Now, in an exactly similar preparation, the presence of alkali in combination with mercuric iodid in our germicidal soap, we have reports of tests made by the Columbus Medical Laboratory, of Chicago; Dr. Novy, of the University of Michigan; Dr. Coplin, of Jefferson Medical College; Dr. Russell, of the University of Wisconsin, all stating that this combination in 1:5,000 is equal to 1:1,000 mercuric chlorid, or 1 per cent. or stronger of carbolic acid, most of them stating that it will destroy *Staphylococcus aureus* in from one to five minutes. See copy of report herewith.

We repeat that the article is unscientific in that the work reported does not bear out the statement in the title of the article; further that the methods are most faulty; further that the conclusions are unwarranted and the inferences false; further that it is a gross libel on the manufacturers.

PARKE, DAVIS & CO.,
E. G. SWIFT, General Manager.

[COMMENT:—That acute observer of human nature, Walter Bagehot, once wrote: "Once submit a subject to the ordeal of discussion, and you can never withdraw it again; you can never again clothe it with mystery, or fence it by consecration; it remains forever open to free choice, and exposed to profane deliberation." One is tempted to ask whether the singular irritation, shown in recent days by the manufacturers of substances used by physicians, has its foundation in an obscure realization of the truth of this saying. Has the sacred veil been lifted? Why is the medical profession not willing to accept with docility the claims of manufacturers and the interpretation placed by them on results of scientific experimenters? Are we really fair to discuss such a subject as the value of antiseptics without due regard to "vested interests"?

Let us see just what is involved in the above objections made by Mr. E. G. Swift, general manager of Parke, Davis & Co., to the article by Drs. Verhoeff and Ellis. In the first place, we are told that, in the opinion of the general manager the methods employed by the investigators were most faulty

and that the tests are unscientific, for the reason, if we understand him correctly, that so many bacteria were introduced that the antiseptic solution was exhausted. But this position hardly seems tenable in view of the fact that control experiments showed that some of the antiseptics acting alone were perfectly efficient. As a matter of fact, we believe that any competent bacteriologist would admit that the methods of Verhoeff and Ellis are good and that the conditions under which their tests were made are clearly stated. The assertion that the experiments were "wholly unfair to the antiseptic and not at all comparable to any method that would be used in the practice of medicine," seems to miss or to avoid the whole point of the article in question and, indeed, that of all experimental work.

We believe also that too much importance should not be attached to the kind of inference that, in the opinion of the general manager of Parke, Davis & Co., "any average reader of the article would draw." On examining the wording of the article with some care we are unable to discover any warrant for any reader assuming that lysol and trikresol "will not do in two hours what mercuric chlorid or carbolic acid will in one minute." In regard to acetozone, furthermore, it does not assist the average reader to an understanding of scientific data to have the general manager postulate that a conflict of authority exists between experimenters working under quite different conditions. Such imaginary inferences of imaginary readers are well known rhetorical devices; we can hardly be asked to mistake them for arguments or for statements of fact.

What, after all, is the real point of the paper by Verhoeff and Ellis? Simply this: It emphasizes the restraining or inactivating influence of albuminous matter on antiseptic substances. There is nothing wholly new in this. It has long been matter of common knowledge that some substances that are powerfully germicidal for bacteria suspended in aqueous solution are, as Rosenau ("Disinfection and Disinfectants," p. 148) says of bichlorid of mercury, "totally inapplicable to the disinfection of albuminous matter." The article in question, however, does call attention in a practical way and by simple and well chosen experiments to the fact that destruction of bacteria by chemical antiseptics within the tissues, and probably also within the intestine, is not likely to occur; that, in fact, serum renders all antiseptics practically useless. So far as the imitation of natural conditions is concerned, we have only to ask whether physicians and surgeons employ antiseptic substances, as a rule, in the presence or absence of albuminous substances. If an antiseptic be used strong enough to destroy bacteria, then the tissue cells themselves will almost certainly be injured. Our knowledge of the properties of living matter in general is quite in accord with the opinion expressed by Verhoeff and Ellis that the reason why any given antiseptic is "non-irritating" is that its action is interfered with by the tissue fluids and, therefore, it is inert for bacteria and tissue cells alike. It does not necessarily follow that every albuminous substance will interfere with the action of antiseptics in the same way and to the same degree as blood serum, nor do we understand the authors of the paper under discussion to claim that this would be so. But there is no escape from the conclusion that they have shown with great clearness that there are substances present in the body fluids that prevent antiseptics from being effective within the tissues, however useful the latter may be as surface disinfectants.

One word more may be added. The assumption by some manufacturers of drugs and antiseptics that physicians are unwilling or incompetent to weigh evidence and that they will accept without scrutiny or question whatever general managers choose to state, is, we believe, not warranted. Specifically, in this case of antiseptic action, what ground have we, or has any one outside of the vested interests, for maintaining that non-irritating chemical antiseptics will kill bacteria within the tissues of the human body, when all the facts of observation and experiment are against this view? Is there really any good reason why we should extend to the "germicidal discs" of Parke, Davis & Co., a consideration not afforded to mercuric chlorid or other well known and commercially, relatively unprofitable, chemicals?—ED.]

Exploration of Both Kidneys Before Nephrectomy Through a Double Lumbar Incision—Question of Priority.

COPENHAGEN, July 12, 1907.

To the Editor:—In a paper entitled "Exploration and Decapsulation of the Other Kidney Before Completing a Nephrectomy" and published in THE JOURNAL, June 1, 1907, Dr. George M. Edebohls describes as his own a method to expose and examine both kidneys through a double lumbar incision, which, since 1893, I have had in use and recommended in cases where it was impossible by other means to decide if a single or both kidneys were affected by a disease which required extirpation.

Dr. Edebohls now proposes "that no nephrectomy should be completed without examination and decapsulation (!) of the remaining kidney." I do not fear that any surgeon who skilfully masters modern diagnostic methods will follow Edebohls' ultramontane proposition and perform such a lot of superfluous lumbar incisions, and therefore, I should have remained quiet if Dr. Edebohls had not forced me to speak by the following astonishing affirmations: "This method of procedure in nephrectomy was, as above pointed out, first practiced and published by me, although Rovsing (*Arch. f. klin. Chir.*, 1904-5, lxxv, 867-895) mistakenly claims priority in the matter more than six years after my publication. Rovsing bases his claim on an operation performed by him in 1894. . . . Nor do any of Rovsing's writings between 1894 and 1904, although many of them deal with nephrectomy as such and detail cases of nephrectomy at great length, contain any mention whatsoever of the procedure under discussion."

All these affirmations are wrong. I have never "claimed priority," simply because nobody formerly, so far as I know, had expressed a doubt thereon, before Dr. Edebohls—mistakenly—claimed the priority for himself. As Dr. Edebohls declares himself that he first practiced the method in 1894, but first published the same in 1898, the following facts will very easily make his mistake evident:

My first operation was performed June 26, 1893, on a 50-year-old man, who suffered from sarcoma of the left kidney, and who is still living, 14 years after the nephrectomy. This case was published and the method very minutely described, discussed and recommended for certain difficult cases in my paper, "Diagnosis and Treatment of Malignant Tumors of the Kidney," which appeared in *Hospitalstidende* May 16, 1894, and in *Archiv. f. klin. Chir.*, 1895, xlix, pp. 406-450. Between 1894 and 1904 I furthermore described or mentioned the method in the following works: 1895: "Surgical Diseases of the Kidney and Ureter." (Volume I of my "Treatise of the Surgical Diseases of the Urinary Organs," published in Danish.) 1897: "Report of Ten Cases of Malign Tumor in the Kidney." (Trans. of the Third Scandinavian Surgical Congress at Helsingfors, *Hospitalstidende*, No. 36, 1897.) 1898: "Mysterious Hemorrhage from a Single Kidney and Its Cure by Nephrectomy." (Read at the British Medical Association meeting at Edinburgh; published in *British Medical Journal.*)

THORKILD ROVSING, M.D.,
Professor of Clinical Surgery at the University in Copenhagen.

Loss of Hair After Radiotherapy.—Hallopeau (*Bull. de Derm. et de Syph.*), that a child was cured of ringworm by Roentgen treatment, but that the exposed parts of the skull have assumed a cicatricial appearance with entire loss of hair. Balzer has observed a similar case in a man given Roentgen treatment for an affection of the beard. After a month of severe Roentgen dermatitis the lesions healed, but left a bald patch of pigmented scar tissue.

Book Notices

PROGRESSIVE MEDICINE. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Materia Medica and Therapeutics in Jefferson Medical College, assisted by H. R. M. Landis, M.D., Visiting Physician to the Tuberculosis Department of the Philadelphia Hospital. Vol. II. June, 1907. Paper. Pp. 381. Price, $6.00 per annum. Philadelphia and New York: Lea Bros. & Co., 1907.

In this volume Dr. William B. Coley reviews the literature on hernia for the past year. Dr. E. M. Foote discusses the surgery of the abdomen, devoting considerable space to the surgical treatment of gastric cancer and postoperative gastric paralysis; in fact, the entire literature on surgical diseases of the stomach and intestines is gone over. The liver and biliary tract, the spleen and pancreas, also receive their share of the discussion. Dr. John G. Clark devotes considerable space to discussion of cancer of the uterus, presenting a very complete review of current literature on this subject, as well as on fibroids and uterine hemorrhage. He touches on enteroptosis, menstruation and on a number of gynecologic operations. Dr. A. Stengel takes up diseases of the blood and ductless glands and constitutional diseases, while Dr. Edward Jackson writes on ophthalmology.

TECHNIC OF OPERATIONS ON THE INTESTINES AND STOMACH. B. M. Einhorn, M.D., Professor of Clinical Medicine at the New York Post-graduate Medical School and Hospital, etc. Fourth Edition Revised. Cloth. Pp. 559. Price, $3.50 net. New York: William Wood & Co., 1906.

This work is an anatomic and experimental study of operations on the stomach and intestines. The repair of intestinal wounds, as described in the opening chapter, is made the basis of the technic of the various operations described in the subsequent chapters. The experimental work has been done thoroughly and conscientiously and the conclusions conservatively drawn. Not all of the recognized operations have been described in the technical part, but sufficient of them to enable one to meet practically any condition which is likely to arise. The numerous illustrations are well executed and clearly depict the points to be brought out. The descriptions are clear and concise, and one can not read the book without being impressed with the fact that the author has done a very creditable piece of work which will be of much value to all who are doing gastrointestinal surgery.

MEDICAL JURISPRUDENCE, FORENSIC MEDICINE AND TOXICOLOGY. By R. A. Witthaus, A.M., M.D., Professor of Chemistry, Physics and Toxicology in Cornell University, and Tracy C. Becker, A.B., LL.B., Counselor at Law, Professor of Criminal Law and Medical Jurisprudence in the University of Buffalo. With the Collaboration of Others. Second Edition. Volume II. Cloth. Pp. 1008. Price, $6.00. New York: William Wood & Co., 1907.

The second volume continues the subject of forensic medicine. The thanatologic division of the subject is completed by the consideration of death from wounds, electricity, suffocation, submersion, and the determination of survivorship. The biothanatologic division of the subject is taken up, including abortion and infanticide, the consideration of pregnancy, sexual incapacity, sexual crimes and railway injuries. This last title introduces a considerable treatise covering 215 pages, discussing this subject in all its relations. The same thoroughness of treatment marks this volume as that found in the first. The subject is fully illustrated by the use of drawings, of which three are colored plates, and by numerous illustrative cases.

EPILEPSY. A Study of the Idiopathic Disease. By William Aldren Turner, M.D., Edin., Fellow of the Royal College of Physicians of London. Cloth. Pp. 272. Price, $3.25 net. London and New York: Macmillan & Co., 1907.

Though starting with what seems to us a defective definition of the disease, making loss of consciousness its essential feature, this is an excellent monograph on the subject of epilepsy. The scope of the book is somewhat limited, but the more important facts are most satisfactorily handled. Turner considers epilepsy a sign or stigma of a neuropathic inherited disposition, based on certain well defined structural defects. All the usually recognized etiologic factors are discussed, but the author does not give the importance to parental alcoholism that is attributed to it by French authors. The psychic features of the disease are well discussed and the general epileptic character is recognized as not solely a consequence of the seizures but an expression of the same nervous constitution which gives rise to the convulsion. Mental failure is not itself an essential feature of the disease. As regards the pathologic anatomy, the actual causal lesions are, he thinks, to be looked for in the intravascular clottings or thrombi which are found in these defective brains, the other lesions are secondary. Certain types of epilepsy may also be attributed to autointoxications. As regards prognosis, he sees little difference betwen hereditary and non-hereditary cases as regards complete arrest of the attacks, but the latter are more amenable to improvement.

TREATMENT OF DISEASE. A Manual of Practical Medicine. By Reynold Webb Wilcox, M.A., M.D., LL.D., Professor of Medicine at the New York Postgraduate Medical School and Hospital. Cloth. Pp. 911. Price, $6.00. Philadelphia: P. Blakiston's Son & Co.

Special emphasis is given in this work to diagnosis and treatment. In the preface the author expresses the view that this is what the practitioner especially desires, and this desire he has undertaken to satisfy. Examination shows that this part of the work has been well done. Still it can not be said that other subjects have been neglected, and the book appears to be well up to date. The therapeutic recommendations are mostly illustrated by official drugs, and where proprietaries are mentioned the systematic chemical name is usually given. A cursory examination shows an apparently unnecessary specification of certain proprietary intestinal antiseptics and hematinics, which are evidently the author's favorites.

ESSENTIALS OF MEDICAL ELECTRICITY. By E. R. Morton, M.D., C.M., Trinity University, Toronto, with eleven plates and seventy illustrations. Cloth. Pp. 192. Price, $1.50 net. Chicago: W. T. Keener & Co., 1905.

The first chapter of this compact handbook is devoted to the first principles of electricity, and thence the student is led to the consideration of sources of supply, medical batteries and accessories, and a special study of the constant current and its modifications. The remaining chapters are assigned to physiology, diagnosis, electric surgery, and general and special therapeutics. The book contains eleven plates and seventy illustrations. The subject of the Roentgen ray is not dealt with by the author, who considers the *x*-ray not electricity in the ordinary acceptance of the term, but rather a form of radiant energy with properties peculiar to itself.

LA TUBERCULOSI. By Mario Valtorta and Gino Fanoli. Con Prefazione del Prof. Augusto Murri. Manuali Hoepli. Con 11 tavoli. Pp. 64. Cloth. Milan: Ulrico Hoepli, 1907.

This is a brief and satisfactory little treatise on tuberculosis covering the subject, in the main, very completely.

Queries and Minor Notes

PETROLATUM AND VASELIN IN CONSTIPATION.

NEW YORK, July 12, 1907.

To the Editor:—Is liquid vaselin useful as an intestinal lubricant and disinfectant; and in what doses? Are there any unfortunate results from the continued use of a preparation? K. C. B.

ANSWER.—Vaselin, petrolatum and liquid paraffin have been recommended by A. Schmidt (*Muench. med. Wochsch.*, No. 41, 1905) for the treatment of habitual constipation. He administers capsules each containing 3 gm. (45 grains) with 10 per cent. of cascare extract. Of these capsules 6 to 8 are needed daily for the relief of the constipation. H. C. Wood states that petrolatum and liquid petrolatum, when taken internally in doses of a dram to an ounce, exert no influence on the system, but act locally on the mucous membrane of the alimentary canal, allaying irritation and provoking soft fecal discharges. There is little, if any, evidence that petrolatum has any disinfecting power. Petroleum containing the lighter paraffins, such as are found in gasoline, has been the cause of poisoning, but the higher paraffins seem to be inert, so that it is not likely that purified petrolatum would give rise to any injury if used in moderate doses. The use of petrolatum for constipation has the disadvantage that a considerable amount would have to be administered in order to be effective. If used as a laxative, therefore, it should be combined with some mild laxative with which it would act as an adjuvant. It should be remembered that liquid vaselin is a trade-mark name for which the official petrolatum liquidum is an efficient substitute.

PRACTICE IN ARGENTINE.

LAMOURE, N. D., July 16, 1907.

To the Editor:—I would like to find out what are the opportunities for the practice of medicine in the Argentine Republic, South America. Can you give me the names of any American physician to whom I might write? Any other information will be greatly appreciated. G. B. RIDDLE.

THE ALEXANDER TREATMENT FOR CANCER.

——, IOWA, July 16, 1907.

To the Editor:—Anent your editorial on the so-called Alexander treatment for cancer, I have received a circular in which they give the following as a "formula": "The fluid which forms the basis of the Alexander treatment is a new compound derived from a union of hydrocarbons, forming a chemical solution represented by the following formula: $C_{27}H_{17}O_2$, to which are added essential oils." Will you give me your opinion regarding their statement as to the composition of their nostrum? X. Y. Z.

ANSWER.—The statements made in regard to the composition of the remedy are meaningless. They are made with the evident intent to mislead, to give the impression, by the use of chemical terms and phrases, that, as a result of much original research, an entirely new chemical substance has been isolated. Fortunately for the profession (unfortunately for the promoters) the circular contains such evident ear-marks of quack literature that few will be humbugged by it. To a chemist the "formula" of the supposedly "new compound derived from a union of hydrocarbons" is sufficient evidence of the nature of the stuff, for to him $C_{27}H_{17}O_2$ spells "impossible." One of the fundamental laws of chemistry, the "law of even number of atoms," says that in carbon compounds "the sum of the atoms with uneven valency (hydrogen, the halogens, nitrogen, phosphorus, etc.) must always be an even number." Compounds having the formula $C_{27}H_{18}O_2$ may, and do, exist, but much evidence would be required to prove the existence of a compound having the formula $C_{27}H_{17}O_2$. The "formula" is a fake.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending July 20, 1907:

Kieffer, C. F., surg., relieved from treatment at Army General Hospital, Washington Barracks, D. C., and ordered to Army General Hospital, Presidio of San Francisco, for observation and treatment.

Ekwurzel, G. M., asst.-surg., relieved from duty at Fort Meade, S. D., to take effect at such time as will enable him to comply with this order, and report at the proper time for duty with the Sixth Cavalry, en route to the Philippine Islands, and on arrival at Manila will report in person to the commanding general, Philippines Division, for assignment to duty.

Keller, W. L., asst.-surg., relieved from duty at Fort Douglas, Utah, to take effect at such time as will enable him to comply with this order, and will proceed to San Francisco and take transport to sail from that place on or about September 5, to the Philippine Islands, and on arrival at Manila will report to the commanding general, Philippines Division for duty.

Richard, Charles, surg., in addition to his other duties, is announced as assistant to the Chief Surgeon, Headquarters Department of the East, Governor's Island, N. Y., and in the absence of the chief surgeon, will perform his duties.

Hess, L. T., asst.-surg., detailed to attend the encampment of the Third Brigade, National Guard, State of New York, to be held at Felt's Mills, near Watertown, N. Y.

Hathaway, L. M., asst.-surg., leave of absence extended fifteen days.

Kieffer, C. F., surg., granted fourteen days' leave of absence.

Murtagh, J. A., asst.-surg., ordered to report to the commanding officer, Seventh Cavalry, for duty to accompany that command to Fort Riley, Kan. On the completion of this duty to return to his station, Fort Mason, Cal.

Buck, C. D., asst.-surg., ordered to report to commanding officer, Seventh Cavalry, for duty to accompany that command to Fort Riley, Kan. On arrival at Fort Riley, granted seven days' leave. On expiration of leave to return to station, Army General Hospital, Presidio of San Francisco.

Fisher, H. C., surg., assignment to duty at Fort D. A. Russell, Wyo., revoked, and instead ordered to Fort Logan, Colo., for duty.

Bourke, James, asst.-surg., ordered to report in person on Aug. 15, 1907, to Major W. H. Arthur, surg., president, examining board, at Army Medical Museum Building, Washington, D. C., for examination to determine his fitness for advancement.

Crosby, W. D., surg., detailed member Army Medical Examining Board, Army Medical Museum Building, Washington, D. C., vice Major J. D. Glennan, surg., hereby relieved.

Appel, A. H., dep. surg. gen., will, on arrival at San Francisco, proceed to Fort D. A. Russell, Wyo., for station and duty.

Glennan, J. D., surg., relieved from duty at Fort Myer, Va., and will proceed to San Francisco and take transport to sail from that place about Oct. 5, 1907, for the Philippine Islands, and on arrival at Manila, report in person to the commanding general, Philippines Division, for assignment to duty.

Hoff, J. Van R., asst.-surg. gen., ordered to report in person to the commanding general, Philippines Division, for duty as chief surgeon of that division.

Kennedy, J. M., surg., detailed member examining board at Army General Hospital, Presidio of San Francisco, vice Major W. Stephenson, surg., hereby relieved.

Snyder, C. R., asst.-surg., on arrival at San Francisco, will proceed to Fort William Henry Harrison, Mont., for temporary duty.

Lewis, W. F., asst.-surg., will report in person Aug. 12, 1907, to Lieut. Col. G. H. Torney, dep. surg. gen., president examining board at Army General Hospital, Presidio of San Francisco, for reexamination to determine his fitness for promotion.

Hall, J. F., asst.-surg., assignment to duty in the Philippines Division revoked, and instead ordered to Fort Gibbon, Alaska, for duty.

O'Connor, R. P., asst.-surg., relieved from duty at Fort Leavenworth, Kan., and ordered to the Philippine Islands for duty instead of to Fort Gibbon, Alaska.

Patterson, E. W., cont. surg., leave of absence extended nine days.

Stanton, S. C., cont. surg., returned to attending surgeon's office, Chicago, from leave of absence.

Chase, C. L., cont. surg., ordered from Middlebury, Ind., to Fort Rodman, Mass., for duty.

Lincoln, H. F., cont. surg., ordered from Fort Leavenworth, Kan., to Fort Meade, S. D., for temporary duty.

Stallman, G. P., dental surg., ordered from Fort Logan H. Roots, Ark., to duty at Fort Sam Houston, Texas.

Navy Changes.

Changes in the Medical Corps, U. S. Navy:

For the week ending July 13, 1907.

Miller, J. T., asst.-surgeon, to the *Rhode Island*.

Grayson, C. T., asst.-surgeon, ordered to the Bureau of Medicine and Surgery, Navy Department.

Rixey, P. M., medical director, commissioned medical director from May 7, 1907.

Holcomb, R. C., surgeon, commissioned surgeon from Dec. 17, 1905.

Kennedy, J. T., surgeon, commissioned surgeon from May 7, 1907.

Munson, F. M., P. A. surgeon, commissioned P. A. surgeon from April 5, 1906.

Heiner, R. G., P. A. surgeon, commissioned P. A. surgeon from Dec. 26, 1906.

Brown, H. L., P. A. surgeon, commissioned P. A. surgeon from April 12, 1907.

Mink, O. J., P. A. surgeon, commissioned P. A. surgeon from June 7, 1907.

Huffman, O. V., asst.-surgeon, ordered to the Naval Hospital, Boston.

Trible, G. B., asst.-surgeon, ordered to the Naval Hospital, Norfolk, Va., July 30.

Garrison, H. A., asst.-surgeon, ordered to the Naval Hospital, Newport, R. I.

Rose, M. E., asst.-surgeon, ordered to the Naval Hospital, New York.

Lumsden, G. P., medical inspector, detached from the naval recruiting station, Indianapolis, and ordered to command the Naval Hospital, Pensacola, Fla.

Nash, F. S., surgeon, detached from command of the Naval Hospital, Canacao, P. I., home and wait orders.

Bishop, L. W., P. A. surgeon, detached from the *Iowa* and granted leave for one month.

Zelesky, W. J., P. A. surgeon, detached from duty with the third torpedo flotilla, on board the *Stringham*, and ordered home to wait orders.

Manchester, J. D., P. A. surgeon, detached from the Naval Hospital, Philadelphia, to the Naval Hospital, Pensacola.

Baker, M. C., acting asst.-surgeon, detached from the *Franklin* and ordered to Midway Islands, sailing from San Francisco about July 25.

Casto, D. H., acting asst.-surgeon, ordered to the naval recruiting station, Indianapolis.

Donelson, A. A., surgeon, ordered to duty with the third torpedo flotilla, on board the *Stringham*.

Chappelear, F. D., acting asst.-surgeon, detached from the Naval Hospital Pensacola, and ordered home to wait orders.

Wickes, G. L., asst.-surgeon, detached from the *Wilmington* and ordered to the *Cincinnati*.

Sellers, F. E., asst.-surgeon, detached from the *Cincinnati* and ordered to the *Wilmington*.

Waldner, P. J., pharmacist, appointed pharmacist from July 3, 1907.

For the week ending July 20, 1907:

McClurg, W. A., medical director, commissioned medical director from June 16, 1907.

Wieber, F. W. F., surgeon, detached from command of the Naval Hospital, Pensacola, and ordered to command the Naval Hospital, Canacao, P. I., sailing from San Francisco about August 8.

McConnon, G. H., asst.-surgeon, resignation accepted to take effect Aug. 1, 1907.

Alderman, C. G., asst.-surgeon, appointed asst.-surgeon from July 9, 1907.

Campbell, R. A., acting asst.-surgeon, detached from duty on the Midway Islands and ordered home to wait orders.

Hough, F. P. W., and McGuire, L. W., acting asst.-surgeons, appointed acting asst.-surgeons from July 12, 1907.

Baker, M. C., asst.-surgeon, appointed assistant surgeon from July 12, 1907.

McConnon, G. H., asst.-surgeon, detached from the *Missouri* July 25, and ordered home to wait orders.

Jones, A. McK., acting asst.-surgeon, orders of June 12 revoked; detached from the naval recruiting station, Chattanooga, Tenn., and ordered to the naval medical school hospital, Washington, D. C., for treatment.

Hermesch, H. R., Boland, M., Dollard, H. L., Huff, E. P., Smith, H. L., Steadman, W. G., Jr., Donelson, M., Curtis, E. E., Casto, D. H., asst.-surgeons, appointed asst.-surgeons from July 12, 1907.

Public Health and Marine-Hospital Service.

List of changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended July 17, 1907:

Kerr, J. W., asst.-surgeon general, granted leave of absence for 20 days from Aug 12, 1907.

Mead, F. W., surgeon, directed to proceed to Point Pleasant, N. J., for the purpose of examining keepers and surfmen of the Life-Saving Service, on completion of which duty to rejoin his station.

Kallock, P. C., surgeon, granted leave of absence for 7 days from July 15, 1907.

Wertenbaker, C. P., surgeon, directed to proceed to Ocean City and other points along the Chesapeake Bay, for the purpose of examining keepers and surfmen of the Life-Saving Service, on completion of which duty to rejoin his station.

Stansfield, H. A., P. A. surgeon, relieved from duty at Havana, Cuba, effective July 11, 1907.

Bahrenburg, L. P. H., P. A. surgeon, granted leave of absence for 7 days from July 15, 1907, under Paragraph 191, Service Regulations.

Herring, R. A., asst.-surgeon, granted leave of absence for 8 days from June 30, 1907, on account of sickness.

Kastle, J. H., chief Division Hygienic Laboratory, designated to attend the 11th annual convention of the Association of State and National Food and Dairy Departments at Jamestown, Va., July 17-19, 1907.

Cleaves, F. H., acting asst.-surgeon, granted leave of absence for six days from July 15, 1907, under Paragraph 210 Service Regulations.

Foster, J. P. C., acting asst. surgeon, granted leave of absence for 27 days from July 20, 1907.

Foster, S. B., acting asst.-surgeon, granted leave of absence for 6 days.

Sanford, M. V., acting asst.-surgeon granted leave of absence for 4 days from July 10, 1907, under Paragraph 210 Service Regulations.

Townsend, W., acting asst.-surgeon, granted leave of absence for 7 days from July 14, 1907.

APPOINTMENT.

Dr. Louis A. Thunig, appointed acting asst.-surgeon, for duty at Stapleton, N. Y.

RESIGNATION.

The resignation of Asst.-Surgeon E. M. Steger was accepted, by direction of the President, to take effect July 14, 1907.

BOARDS CONVENED.

A board of medical officers was to meet at Baltimore, July 24, 1907, for the physical examination of certain officers of the Revenue-Cutter Service. Detail for the Board: P. A. Surgeon J. T. Burkhalter, chairman; Acting asst. surgeon J. LaB. Ward, recorder.

A board of medical officers was to meet at San Francisco, July 24, 1907, for the physical examination of certain officers of the Revenue Cutter Service. Detail for the board: Surgeon H. W. Austin, chairman; P. A. Surgeon J. D. Long, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended July 19, 1907:

SMALLPOX—UNITED STATES.

California: San Francisco, June 22-July 6, 2 cases.
Illinois: Chicago, July 6-13, 3 cases; Galesburg, June 29-July 6, 1 case.
Indiana: Elkhart, June 29-July 6, 1 case; Indianapolis, June 30-July 7, 1 case.
Kansas: Kansas City, June 29-July 6, 3 cases.
Louisiana: New Orleans, June 29-July 6, 6 cases, 1 death.
Michigan: Detroit, June 29-July 6, 1 case.
Mississippi: Natchez, June 29-July 6, 2 imported cases.
Missouri: St. Joseph, June 30-July 6, 3 cases; St. Louis, June 30-July 6, 1 case.
New York: New York, June 29-July 6, 1 case.
North Carolina: Wilmington, July 10, 2 cases (1 imported).
Tennessee: Nashville, July 6-13, 1 case.
Virginia: Richmond, June 29-July 6, 2 cases.
Washington: Spokane, June 29-July 6, 10 cases (5 imported).
Wisconsin: Milwaukee, June 29-July 6, 3 cases.

SMALLPOX—INSULAR.

Philippine Islands: Manila, May 25-June 1, 3 cases.

SMALLPOX—FOREIGN.

Brazil: Para, June 22-29, 3 cases, 1 death.
Canada: Halifax, N. S., June 30-July 6, 1 case; Sherbrooke, Que., June 1-30, 2 cases.
Chile: Iquique, June 15, present.
France: Paris, June 22-29, 12 cases.
Germany: General, June 1-8, 4 cases; supplemental, June 15-22, 6 cases.
Great Britain: Manchester, June 15-23, 1 case.
India: Bombay, June 4-11, 2 deaths; Calcutta, May 25-June 1, 26 deaths; Madras, June 1-7, 2 deaths.
Italy: General, June 20-27, 27 cases; Florence, June 16-30, 3 cases.
Japan: Yokohama, May 20-27, 1 case.
Java: Batavia, May 25-June 1, 2 cases.
Madeira: Funchal, June 15-30, 100 cases, 25 deaths.
Mexico: Augas Calientes, June 22-July 6, 15 deaths; Mexico City, June 8-22, 16 deaths; Monterey, June 23-30, 1 death.
Panama: Colon, June 30, 1 case on steamship.
Portugal: Lisbon, June 15-22, 7 cases.
Russia: Batoum, May 1-31, 2 cases; Odessa, June 15-22, 3 cases; Riga, June 15-22, 4 cases; St. Petersburg, June 1-22, 11 cases, 3 deaths.
Siberia: Vladivostok, May 14-21, 1 case.
Spain: Barcelona, June 10-20, 3 deaths; Madrid, May 1-31, 3 deaths; Valencia, June 15-30, 32 cases, 3 deaths.
Straits Settlements: Singapore, May 25-June 1, 1 death.
Turkey: Constantinople, June 16-23, 2 deaths; Damascus, June 8-15, present..

YELLOW FEVER.

Brazil: Manaos, June 15-22, 1 death; Para, June 22-29, 4 cases, 4 deaths.
Ecuador: Guayaquil, June 15-22, 3 deaths.
West Indies: Trinidad, June 15-22, 2 cases.

CHOLERA.

India: Bombay, June 4-11, 3 deaths; Calcutta, May 25-June 1, 32 deaths; Kashmir, May 26-June 3, 1,447 cases, 771 deaths.

PLAGUE.

Africa: King Williams Town, May 26-June 1, 1 case.
Egypt: Alexandria, June 13-27, 7 cases, 3 deaths; Assiout Province, June 13-27, 2 cases, 6 deaths; Behera Province, June 13-27, 3 cases, 9 deaths; Beni Souef Province, June 13-27, 1 death; Kena Province, June 13-27, 11 cases, 12 deaths; Minieh Province, June 13-27, 2 cases.
India: Bombay, June 4-11, 39 deaths; Calcutta, May 25-June 1, 100 cases, 100 deaths; Rangoon, May 25-June 1, 44 deaths.
Japan: Yokohama, June 13-21, 4 cases, 4 deaths.
New Zealand: Auckland, May 1-15, 2 cases, 2 deaths.
Peru: Callao, May 31-June 6, 2 cases; Chiclayo, May 31-June 6, 1 death; Lima, May 31-June 6, 5 cases, 3 deaths; Mollendo, May 31-June 6, 2 cases, 2 deaths; Paita, May 31-June 6, 1 case; Trujillo, May 31-June 6, 10 cases, 5 deaths.
Russia: Astrachan Province, June 20, 3 cases.
French Indo China: Cholon, May 3-10, present; Saigon, May 3-10, present.
Turkey: Djeddah, May 30, 1 case, 1 death.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, CONTRACT PRACTICE, INSURANCE FEES, MEDICAL LEGISLATION, ETC.

An Able Leader.

At the last meeting of the West Virginia State Medical Association Dr. William W. Golden, the retiring president, delivered an address of more than usual importance. Dr. Golden was elected president of the state association last year after having served as secretary, with unusual efficiency for a number of years. He has, consequently, been closely identified with the state association during the most important formative period of its existence. His views on medical organization and the future of the state association are, therefore, in every way worthy of consideration.

THE STATE JOURNAL.

In his address Dr. Golden first considered the question of the state journal—a subject of especial interest in West Virginia, since the first year of the existence of their state journal had just terminated. On this subject Dr. Golden says:

Our future historians will have no difficulty in designating the fortieth year of the association's existence by the establishment of our state journal. The absence of a journal has taxed some of us enormously; for immediate personal effort shrinks into insignificance when compared with the power of the press. The journal remains a necessity of the future. It is, therefore, a matter of congratulation that it has been established and that it has already passed the stage of experiment.

NEW MEDICAL LAW.

Regarding the adoption of the new medical practice act in West Virginia Dr. Golden says:

The medical laws passed at the last legislature are of greater credit to our association than those which were enacted through its efforts before. Henceforth our state will cease to be a dumping ground for the "flunks" of boards of examiners of neighboring states. Medical diploma mills will no longer be able to point to West Virginia as a place where their impecunious matriculates can practice and gather enough money for the payment of their tuition fees. The osteopath will no longer be a menace to the health and lives of our citizens, for, before he can practice, he must qualify as one able to diagnose and differentiate diseases. The clause providing for reciprocity is a direct benefit for every one of us and in its enactment we have cause for rejoicing. The victory is due to the extent and efficiency of organization which the West Virginia State Medical Association has achieved this year. The earnestness with which medical legislation was discussed at our annual meeting in 1906 foreshadowed success. Every one present left that meeting feeling a double responsibility in the matter. The subsequent discussion of it in the meetings of the component societies caused its importance to be felt among the rest of the profession and, through them, among the entire profession of the state. This made agitation among

the thinking classes of our people fairly easy and the readiness with which they signed our petition to the legislature was remarkable.

It is interesting to note, in view of some criticisms which have been made, that, after a year's experience as president and several years' experience as secretary of the state association, Dr. Golden recommends the abolition of the present custom of auditing the books of the association by a committee appointed at the annual session and the substitution therefor of a regular auditing by an expert accountant after the present custom of the American Medical Association. He also recommends that the president be elected a year in advance in order to allow him to acquaint himself with the duties of his position. After emphasizing the disinterestedness and unselfishness of the true doctor's work, Dr. Golden says:

As a society, let us grasp every opportunity to show the public our genuine interest in their welfare. Every epidemic of disease, the sanitation of our school houses and other public buildings, the purity of our water supply, the effectiveness of our sewage system and the dissemination of correct information about the social evil, are examples of golden opportunities for this purpose. With a thoroughly organized profession, constantly broadening in its scope and influence, amplifying and holding steadfastly to the commendable things already achieved, let us continue to give the best of our intellectual and physical efforts for the advancement of all the essentials that make not only for the health and well-being of the individual as a unit, but also in a broader sense for the advancement of the race.

Restrict Distribution of Objectionable Literature.

The *Bulletin of the Iowa State Board of Health* for July announces that the city council of Iowa Falls has passed a resolution forbidding the distribution from house to house, or the displaying in public places and on the streets, of samples of nostrums and literature referring to private diseases or other subjects that may have a tendency to corrupt the minds of the young. Such police regulations are thoroughly within the jurisdiction of city government, and it is a matter for congratulation that communities are waking up to the dangers that should be avoided. Iowa Falls has gone further than is usual in its regulation of literature as well as samples, and it is to be hoped that many of our cities will follow her example.

New Practice Law in Missouri.

The *Journal of the Missouri State Medical Association* comments editorially, in its July issue, on the new medical practice act which became effective in that state June 15. Under its provisions no one but graduates of medical colleges may appear before the board. Physicians who graduated previous to 1901 must have had four years of college training; those previous to that time must have had two years. The minimum requirements recommended by the Council on Medical Education have been adopted by the board. County societies are authorized to lodge information with the county prosecuting attorney against violators of the law. The provisions of the law make successful prosecution of illegal practitioners possible.

Marriages

JOHN W. WOODMAN, M.D., to Miss Edna Wheeler, both of Baltimore, July 10.

HILDA A. SIMON, M.D., and Byron M. Swingler, both of Spokane, Wash., July 7.

CHESTER LEA MAGEE, M.D., Los Angeles, Cal., to Miss Ednah Cole Ballantyne, June 20.

GEORGE EDWARD NORTON, M.D., Cambridge, Mass., to Miss Nellie M. O'Connor of Baltimore, July 10.

DAVID HALLIDAY MOFFAT GILLESPIE, M.D., New York City, to Miss Lilian Brechemin, in London, July 20.

JOHN ARCHIBALD STEWART, M.D., Portland, Ore., to Miss Nell Israel Junkin of Fairfield, Iowa, July 10.

HOUSTON B. HYATT, M.D., Clinton, N. C., to Miss Kathleen C. Sadtler of Baltimore, at Washington, D. C., July 8.

MILTON UNDERWOOD MCINTYRE, M.D., Smithfield, W. Va., to Miss Marguerite Fullerton of Huntington, W. Va., July 11.

GUY V. RUKKE, M.D., assistant surgeon, United States Navy, to Miss Ellen Shaffer of Ann Arbor, Mich., at Huntington, Ind., July 9.

Deaths

William T. Bolton, M.D. Jefferson Medical College, Philadelphia, 1882; a member of the Medical Society of the State of California and Los Angeles County Medical Society; formerly of Batavia, N. Y., and at one time secretary of the Genesee County (N. Y.) Medical Society; died suddenly at his home in Los Angeles, Cal., July 12, aged 48.

C. Benjamin Stephenson, M.D. Medical Department of the Tulane University of Louisiana, New Orleans, 1891; of Charlotte, N. C.; a member of the Medical Society of the State of North Carolina and Mecklenburg County Medical Society, died suddenly at a sanatorium, after a long period of invalidism, aged 46.

William Mazyck, M.D. Medical College of the State of South Carolina, Charleston, 1900; a member of the South Carolina Medical Association and Charleston County Medical Society, and for four years city physician of Charleston, died at his home in that city, July 10, after an illness of one week, aged 31.

Frederick R. Weber, M.D. University of Munich, Germany, 1890; a member of the American Medical Association; pathologist to the Milwaukee County Hospital; professor of clinical medicine in the Milwaukee Medical College, died at his home in Milwaukee, July 17, after an illness of one week, aged 43.

Edward Joseph Gallagher, M.D. Bellevue Hospital Medical College, New York City, 1887; of New York City; a member of the American Medical Association, and the Celtic Medical Society; visiting physician to the House of Calvary Hospital, was killed in an automobile accident, July 21, aged 51.

William E. Pittman, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1868; a member of the American Medical Association; a Confederate veteran and a prominent physician of Lynchburg, Va., died at his home in that city, July 10, from heart disease, aged 66.

Jeremiah Gilbert, M.D. Medical Department of the Tulane University of Louisiana, New Orleans, 1872; a member of the American Medical Association; of Shaw, Miss.; died at a sanatorium in that city, July 8, as the result of an operation performed two weeks previous, aged 59.

John F. Rudell, M.D. Hospital College of Medicine, Medical Department, Central University of Kentucky, Louisville, 1882; for several years a member of the school board of Louisville, died at his home in that city, July 13, after an illness of five months, from nephritis, aged 59.

Frank Henry Watkins, M.D. Medical College of Ohio, Medical Department University of Cincinnati, 1864; a member of the Ohio State Medical Association and Miami County Medical Society, died at his home in Peru, Ind., May 28, after an illness of six months, aged 70.

Forrest Leon Estill, M.D. Washington University Medical Department, St. Louis, 1903; a member of the Colorado State and El Paso County medical societies; died at his home in Colorado Springs, Colo., July 15, after an illness of three weeks, aged 27.

Henry L. Furbeck, M.D. Albany (N. Y.) Medical College, 1881; of St. Johnsville, N. Y.; a member of the Medical Society of the State of New York and Montgomery County Medical Society, died at the Albany Hospital, July 11, aged about 49.

John Ray Bare, M.D. University of Louisville (Ky.) Medical Department, 1852; assistant surgeon and surgeon during the Civil War; the oldest practitioner of southern Indiana; died at his home in Salem, July 8, from senile debility, aged 86.

John Henry Criswell, M.D. Cincinnati College of Medicine and Surgery, 1896; a member of the state legislature from Marion County; died at his home in Marion, Ohio, July 14, as the result of a fall sustained eighteen months ago, aged 56.

Thomas Moore Livingston, M.D. Bellevue Hospital Medical College, 1872; a member of the American Medical Association, and at one time president of the board of health of Columbia, Pa., died at his home in that city, July 13, aged 63.

James Edwin Russell, M.D. New York Homeopathic Medical College and Hospital, New York City, 1880; died at the Harlem Hospital, July 21, as the result of an attack reported to have been made on him by robbers, July 19.

August J. Radike, M.D. Ensworth Medical College, St. Joseph, Mo., 1894; a member of the Vermont State and Chittenden County medical societies, died at his home in Burlington, Vt., July 19, after a long illness, aged 51.

Washington Gay Elliott, M.D. Western Reserve University Medical College, Cleveland, 1849; assistant surgeon of volunteers during the Civil War, died at the home of his son in Holly Springs, Miss., July 16, aged 83.

William C. Stewart, M.D. Baltimore Medical College, 1901; of Johnetta, Pa.; a member of the Armstrong County Medical Society, died at his home in that place, July 12, from diabetes, after a lingering illness, aged 36.

James H. White, M.D. Starling Medical College, Columbus, Ohio, 1870; a pioneer physician of Delaware County, where he had practiced for 50 years, died at his home in Delaware, July 14, from paralysis, aged 90.

Simpson R. Denton, M.D. Bellevue Hospital Medical College, New York City, 1882; a member of the Illinois State and Hancock County medical societies, died at his home in Elvaston, Ill., July 10, aged 53.

Christian M. Hoffman, M.D. Jefferson Medical College, Philadelphia, 1862; for 45 years a practitioner of Sinking Spring, Pa., died at his home in that place, July 6, after an illness of one year, aged 73.

Charles M. Johnson, M.D. Jefferson Medical College, Philadelphia, 1863; formerly of Watertown, N. Y.; died at his home in San Diego, Cal., recently, as the result of a fall from a street car, aged 67.

Carl D. Stone, M.D. College of Physicians and Surgeons, Chicago, 1898; of Chicago, died at the Michael Reese Hospital, in that city, July 18, from typhoid fever, after an illness of one month, aged 35.

Isaiah Henry White, M.D. University of Virginia Department of Medicine, Charlottesville, 1861; of Richmond, Va., died at his home in that city, July 15, after an illness of over a year, aged 69.

Angus K. McNair, M.D. New Orelans (La.) School of Medicine, 1861; a surgeon in the Confederate army during the Civil War, died at his home in Fayette, Miss., June 29, aged 70.

William Miller, M.D. University of Iowa, College of Homeopathic Medicine, Iowa City, 1881; of Davenport, Iowa; died at his home in that city, July 6, from cerebral hemorrhage, aged 59.

Robert O. Craig, M.D. Albany (N. Y.) Medical College, 1855; a pioneer practitioner of Watseka County, Minn., died at his home in Janesville, Minn., July 13, from senile debility, aged 74.

Elmore Y. King, M.D. Bellevue Hospital Medical College, New York City, 1865; died at his home in Richwood, Ohio, July 11, from paresis, after an illness of a few months, aged 70.

William Le Grange Ralph, M.D. College of Physicians and Surgeons in the City of New York, 1879; of Washington; died at the George Washington University Hospital, July 8, aged 56.

William W. Robinson, M.D. Missouri Medical College, St. Louis, 1898; a member of the American Medical Association; died at his home in Loveland, Colo., from asthma, July 12, aged 36.

J. W. Jenkins, M.D. Beaumont Hospital Medical College, St. Louis, 1888; formerly district surgeon for the Iron Mountain Railway; died at St. Louis, Mo., July 5, after a long illness.

William Todd Smith, M.D. Jefferson Medical College, Philadelphia, 1854; of Springfield, Ill.; died at his home in that city, July 6, from senile debility, aged 84.

Edward F. Kelley, M.D. New York University Medical College, New York City, 1873; of Pulaski, N. Y., died at the home of his son-in-law, July 15, aged 63.

George A. Sweeney, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1898; died at his home in Chester, Pa., July 8, aged 33.

Joseph A. Krieger, M.D. Missouri Medical College, St. Louis, 1888; of St. Louis; died at the City Hospital in that city, July 12, aged 43.

Sidney Arthur King, M.D. Medical Department, Victoria College, 1867; died at his home in Kingsville, Ont., July 8, from nephritis, aged 65.

James B. Kennah, M.D. Albany (N. Y.) Medical College, 1889; died at his home in Saratoga, N. Y., July 11, after a prolonged illness.

Charles William Cunnion, M.D. Long Island College Hospital, Brooklyn, 1895; died at his home in Brooklyn, July 5, aged 34.

Death Abroad.

Sir William Tennant Gairdner, M.D. Edin. and Dub., K.C.B., J.J.D., F.R.S., F.R.C.P., consulting physician to the Western Infirmary, Glasgow, late professor of medicine in the University of Glasgow, died somewhat suddenly, June 28, at Midlothian, from heart disease, at the age of 82. He was the greatest and most cultured teacher of medicine of his generation in the Scottish schools. In 1848 he was appointed pathologist to the Edinburgh Royal Infirmary and in 1850, at the extraordinarily early age of 26, he was elected a fellow of the Royal College of Physicians of Edinburgh. Three years later he became physician to the Royal Infirmary and extramural lecturer on the practice of medicine and clinical medicine. His reputation as a physician and teacher were so great that in 1862 he was asked by the University of Glasgow to accept the chair of medicine. With this appointment he became ex-officio physician to the Glasgow Royal Infirmary. He was much interested in public health and published an important work on the subject. He was consequently appointed health officer of the city of Glasgow. He effected a revolution in the sanitary condition of the city, which was in a state of dirt and overcrowding such as do not exist in Great Britain to-day. As a teacher his dominating characteristics were originality and independence. He disregarded authority when he could not prove the matter himself. He was deeply religious, realizing that there is no antagonism between true religion and true science. In therapeutics he always insisted on the *vis medicatrix naturæ* and his expectant treatment caused him to be regarded by some as intolerant of drugs. Perhaps his most important piece of work was his opposition to the current treatment of disease by large doses of alcohol inspired by the teaching of Todd. In the sixties, when typhus fever was prevalent, he withheld alcohol from his younger patients suffering from the disease and gave it in only moderate doses to a small percentage of adults. His mortality was only 12 per cent., while that of Todd at King's College Hospital was 25 per cent. Probably he did more than any other man in disabusing the profession of the exaggerated views held as to the value of alcohol.

Society Proceedings

COMING MEETINGS.

Minnesota State Medical Association, Duluth, August 13.
Ohio State Medical Association, Cedar Point, August 28.
Wisconsin State Medical Society, Superior, August 20-22.
Medical Society of the Missouri Valley, Council Bluffs, September 5.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Regular Meeting, held June 26, 1907.

DR. JAY F. SCHAMBERG in the Chair.

SYMPOSIUM ON OFFICIAL PHARMACEUTIC PREPARATIONS.

The Lack of Necessity for Proprietary Mixtures.

DR. S. SOLIS-COHEN said that the most of the trouble comes from a confusion of terms. The term "proprietary mixtures" does not necessarily mean fraudulent and secret mixtures, for while there are some proprietary mixtures which are fraudulent and secret, there are also those which are straightforward, open and excellent. Speaking of the need for mixtures, in the majority of cases Dr. Cohen thought they are unnecessary because in nearly every case a skilful pharmacist ought to be able to compound any mixture which a physician ought to administer to his patients. The ground was taken that any physician in doubt has before him two methods without resorting to proprietary mixtures: 1. Not to give so many things to the same patient at the same time. 2. Supposing that all the ingredients are necessary, it is still possible to put up a number of separate prescriptions and allow the patient to take them at

proper times. A third way out, and one adopted by Dr. Cohen, is to call up a druggist and ask if there is any physical or chemical incompatibility in a certain combination of drugs, and whether the mixture is palatable. In a few cases, however, because of the difficulty of mixing together certain ingredients, on account of the difficulty of obtaining a pure article, or because of the advantage of age in preparation, a mixture which can be obtained ready-made and which is made by a careful manufacturer may be justifiable. The great objection to many of the preparations is that their administration to different individuals becomes mechanical.

Official versus Proprietary Preparation.

DR. HORATIO C. WOOD, JR., divided proprietary preparations into those containing but one chemical substance and those containing several. Those belonging to the first class he occasionally prescribes, but with certain precautions. He believes the world would be better off had scientific chemistry never entered the field of medicine. He bases his objection to proprietary preparations on the impossibility of being certain of their composition, the tendency to increase self-medication, the generally inferior quality of the drugs, and the extortionate prices charged for them. As an evidence of the immense profits made by the drug houses, tables were shown giving the prices charged by wholesale jobbing houses in this country and in England. Because of the peculiar patent laws the prices in America are much in advance of those in England. For example, in England aspirin sells for 58 cents per pound; in America for $6.88. In England creosotal costs $1.98 a pound; in America, $9 a pound. In England dermatol costs 27 cents a pound; in America, $3; while sulphonal, which in England sells for 77 cents a pound, in America sells for $21.60 a pound. As a practitioner of medicine and student of therapeutics, Dr. Wood protests against the use of all ready-made mixtures, especially those controlled by drug houses, as hampering seriously the advance of rational medicine. The symptoms of disease being different in every two individuals, the rational treatment must be modified according to the individual case. He who uses a routine cough syrup is as far astray as the man who has a sure cure for pneumonia or typhoid fever.

Exhibition of Official Preparations.

MR. M. I. WILBERT thought all would agree from a review of the present status of proprietary articles that there remains plenty of work to be done by the Council on Pharmacy and Chemistry and the individual practitioner. Numerous instances were given of misrepresentation in proprietary remedies. The necessity of the cooperation of the medical men and pharmacists was indicated. Unless this cooperation is entered into the medical men are the sufferers, because in the event of the failure of the patient to receive the expected benefit from the action of the prescribed medicine, the physician's ability is questioned.

MR. FRANK E. MORGAN laid stress on the fact that the patient's condition should be diagnosed and the proper remedy provided, rather than that the disease should be adapted to any ready-made formula.

MR. JOSEPH W. ENGLAND said that what is needed to-day is not more ready-made pharmaceutic preparations, whether proprietary or non-proprietary, but a better knowledge of the physical and chemical properties of drugs, and a clearer knowledge of the individualities of the patients that take the drugs, to the end that there may be the best adjustment of the former to best meet the needs of the latter. Individualism in prescription writing, as a part of individualism in treatment, he thought should obtain. The reason that the ready-made formula, as a rule, is not adapted for individual treatment was said to be due chiefly to the fact that it is generally badly "balanced" therapeutically. As striking examples of this were cited the N. F. elixir of phosphorus and nux vomica, and Basham's mixture of the previous edition of the U. S. Pharmacopeia. An equally serious fault with the official ready-made preparations was the small amount of originality shown in the matter of flavors.

DR. J. C. COOPER thought that the great evil of the question lay in the fact of American haste and American ignorance. Unfortunately, the question too often asked is, "What shall I give in order to get the patient out soon?" The question should be, "What shall I give in order to cure the patient?"

DR. R. MAX GOEPP thought there should be some method devised whereby the official names could be made easier for those not so well accustomed to chemistry as they perhaps should be.

MR. HENRY C. BLAIR spoke of the hundreds of bottles of ready-made mixtures from the druggists' stores necessarily consigned to the refuse pile, from which only a few ounces had been taken. While in some cases these remedies possibly do some good to the patients, in the majority they do not. Admitting that there are a few good proprietary remedies, the greater number were regarded as of no value.

Medical Education and State Boards of Registration

COMING EXAMINATIONS.

KENTUCKY State Board of Health, City Hall Building, Louisville, August 1-2. Secretary, Dr. J. N. McCormack, Bowling Green.

CALIFORNIA Board of Medical Examiners, San Francisco, August 6. Associate Secretary, Dr. F. Dudley Tait, San Francisco.

NEBRASKA State Board of Health, State House, Lincoln, August 7-8. Secretary, Dr. Geo. H. Brash, Beatrice.

The Philippine Medical School.—The first annual announcement of the new Philippine Medical School has just reached us. This school is a direct part of the educational system of the Philippine Islands, having been established by the Philippine Commission. The requirement for admission is a high-school education or its equivalent, the candidate being subjected to an examination in mathematics: arithmetic, algebra through quadratic equations and plane geometry; English: grammar, composition and sight reading from standard English works; literature: a knowledge of two books out of five standard works which may be English, French, German or Spanish, as selected by the student; history of the Philippine Islands and general history; Latin grammar and four books of Caesar; physics, chemistry and biology. The medical course will extend over five years, the first two being devoted to practical work combined with demonstrations, recitations and lectures in the laboratories of anatomy, physiology, chemistry, pharmacology and toxicology, pathology and bacteriology. The last three years will be taken up with the clinical branches in hospital wards and dispensaries and will include thorough instruction in hygiene, sanitation and tropical diseases. The first session began June 10, 1907, and will end Feb. 28, 1908.

Connecticut Homeopathic January Report.—Dr. E. C. M. Hall, secretary of the Connecticut Homeopathic Medical Examining Board, reports the special written examination held at New Haven, Jan. 1, 1907. The total number of subjects examined in was 8; total number of questions asked, 70; percentage required to pass, 75. Only one candidate, a graduate of the Hahnemann Medical College of Philadelphia in 1901, appeared for license and was successful.

Connecticut Eclectic March Report.—Dr. Thomas S. Hodge, secretary of the Connecticut Eclectic Medical Examining Board, reports the written examination held at New Haven, March 12, 1907. The number of subjects examined in was 11; total number of questions asked, 10; percentage required to pass, 75. The total number of candidates examined was 7, of whom 1 passed and 6 failed. One reciprocal license was granted at this examination. The following colleges were represented:

PASSED. College.	Year Grad.	Per Cent.
Dartmouth Med. Coll.	(1902)	75
FAILED.		**Total number examined.**
University of Naples		*6
LICENSED THROUGH RECIPROCITY.		
Eclectic Med. Institute, Cincinnati	(1896)	Illinois

*Years of graduation not obtained.

Connecticut March Report.—Dr. Charles A. Tuttle, secretary of the Connecticut Medical Examining Board, reports the written examination held at New Haven, March 13-14, 1907. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 19, of whom 14 passed and 5 failed. The following colleges were represented:

College.	Year Grad.
PASSED.	
Baltimore Medical College	(1906)
Johns Hopkins University	(1905)
Dartmouth Medical College	(1907)
New York University	(1892)
Columbia University	(1905)
Bellevue Hosp. Medical College	(1906)
Yale University	(1905), (3, 1906)
University of Pennsylvania	(1899)
Medico-Chirurgical College, Philadelphia	(1904)
University of Vermont	(1905)
Owen's College, England	(1892)
FAILED.	
Baltimore University	(1900)
Baltimore Medical College	(1906)
Tufts College Medical School	(1905)
College of P. and S., Boston	(1906)
Laval University	(1902)

California April Report.—Dr. F. Dudley Tait, associate secretary of the State Board of Medical Examiners of California, reports the written examination held at San Francisco, April 16, 1907. The number of subjects examined in was 9; percentage required to pass, 75. The total number of candidates examined was 44, of whom 25 passed and 19 failed. The following colleges were represented:

PASSED.

College.	Year of graduation.	Anatomy.	Bacteriology.	Chemistry.	Materia medica.	Obstetrics.	Pathology.	Physiology.	Medicine.	Surgery.	Gen. average.
Calif. Med. Coll.	1906	88	87	72	81	72	75	69	89	77	78.8
Coll. of P.&S., San Francisco	1906	90	86	77	86	83	76	91	79	84	83.5
Coll. of P.&S., San Francisco	1906	98	78	76	84	77	75	88	92	82	83.3
Coll. of P.&S., San Francisco	1906	91	73	82	89	75	72	75	79	75	79
Coll. of P.&S., San Francisco	1906	95	79	80	78	75	60	61	79	75	75.7
Coll. of P.&S., San Francisco	1907	95	70	83	85	78	61	60	93	75	77.7
Cooper Med. Coll.	1906	93	79	78	83	88	84	92	75	95	85.2
University of California	1906	96	70	69	77	83	82	90	93	90	83.3
University of California	1907	90	81	77	80	81	98	75	77	95	83.7
Univ. of Southern California	1905	79	68	71	79	84	76	66	73	79	75
Univ. of Southern California	1906	93	87	72	77	75	70	84	83	78	79.8
Denver & Gross Coll. of Med	1903	98	77	80	87	77	76	87	90	80	83.5
Coll. of P. & S., Chicago	1903	82	72	77	82	75	63	85	90	88	79.3
Coll. of P. & S., Keokuk	1885	94	84	72	83	82	68	75	76	70	78.2
University of Maryland	1887	95	90	73	88	90	64	85	96	80	83.5
Harvard Medical School	1886	87	60	74	81	68	77	65	82	90	76
Harvard Medical School	1892	81	65	63	82	75	79	80	77	75	75.2
Washington Univ., St. Louis.	1906	85	78	78	72	65	82	60	78	89	76.3
Long Island Coll. Hosp.	1901	85	60	84	80	98	60	71	77	70	76.1
Cleveland Coll. of P. & S.	1905	93	75	78	75	74	77	81	86	78	79.6
Eclectic Med. Inst.,Cincinnati	1896	88	88	60	84	67	61	78	86	68	75.5
*Columbus Medical College	1886	85	84	81	96	86	60	89	81	80	82.4
Hahnemann Med. Coll., Phila	1893	78	69	72	91	71	68	63	89	74	75
University of Pennsylvania	1898	87	69	79	83	76	67	75	69	70	75
St. Bartholomew Hosp., Eng.	1898	84	64	64	68	88	88	75	75	93	77.6
FAILED.											
Coll. of P.&S., San Francisco	1905	82	44	53	59	25	45	46	65	50	52.1
Coll. of P.&S., San Francisco	1906	78	66	60	66	77	58	50	66	73	66
Univ. of Southern California	1904	76	57	60	80	84	66	70	75	75	71.4
Univ. of Southern California	1906	78	66	61	80	53	73	50	75	75	67.8
Howard U., Washington, D.C.	1887	83	57	74	79	70	75	65	61	70	70.4
Hahnemann M. Coll., Chicago	1895	92	31	72	75	79	58	54	81	68	67.7
Bennett Coll. Ecl. Med.&Surg	1902	79	80	63	86	81	42	55	80	60	69.5
University of Iowa	1890	77	53	66	79	67	68	41	62	70	64.7
Baltimore Medical College	1906	77	48	66	81	75	72	52	72	70	67.1
American Med. Coll. St.Louis	1905	75	76	54	87	68	36	56	82	68	66.8
Kansas City Med. Coll.	1896	68	68	70	77	75	69	48	70	75	68.8
University of Missouri	1897	70	52	69	90	62	75	54	70	76	68.6
Bellevue Hosp. Med. Coll.	1880	58	24	66	75	77	61	20	34	70	53.8
Univ. & Bellevue Hosp. M. C.	1904	81	41	69	67	76	70	60	76	75	67.2
Cleveland Homeo. Med. Coll.	1892	63	19	62	75	68	39	10	88	46	52.2
Medico-Chirurg. Coll., Phila.	1904	81	54	73	78	69	62	59	75	75	69.5
University of Pennsylvania	1906	..	..	..	..	..	26	50	79	90	27.2
University of Athens, Greece	1906	15	31	40	55	43	37	33	55	50	39.8
University of Rome, Italy	1905	84	71	68	71	65	56	65	88	94	73.2

*Merged with Starling Medical College in 1892.

Georgia Eclectic April Report.—Dr. C. H. Field, secretary of the Georgia Eclectic Medical Examining Board, reports the written examination held at Atlanta, April 3, 1907. The number of subjects examined in was 13; total number of questions asked, 96; percentage required to pass, 80. The total number of candidates examined was 13, of whom 12 passed and 1 failed. The following colleges were represented:

College.	Year Grad.	Per Cent.
PASSED.		
Georgia Coll. of Ecl. Med. and Surg., (1907), the grade of 85 was reached by five, 90 by four, and 95 by two.		
Eclectic Med. Inst., Cincinnati	(1891)	98
FAILED.		
Georgia Coll. of Ecl. Med. and Surg.	(1907)	70

Georgia April and May Reports.—Dr. E. R. Anthony, secretary of the Regular Board of Medical Examiners of Georgia, reports the written examinations held at Atlanta, April 30-May 1, 1907, and at Augusta, May 2-3, 1907. The number of subjects examined in was 10; total number of questions asked, 50; percentage required to pass, 75.

At the examination held at Atlanta, April 30-May 1, the total number of candidates examined was 86, of whom 73 passed and 13 failed. The following colleges were represented:

College.	Year Grad.	Per Cent.
PASSED.		
Howard University	(1906)	84, 86
Birmingham Med. Coll.	(1904)	84
Atlanta College of P. and S. (1901) 86; (1907) the grade of 77 was reached by one, 78 by two, 79 by one, 80 by three, 81 by four, 82 and 83 by one each, 84 by six, 85 by two, 86, 88, 89, 91 and 95 by one each, and 94 by three.		
Medical College of Georgia	(1905)	77
Atlanta School of Med. (1907) the grades of 76 and 78 were reached by two each, 77 and 79 by one each, 80 by three, 81 by one, 83 by two, and 86, 87 and 91 by one each.		
International Med. Miss. Coll., Atlanta	(1907)	84
Tulane University	(1906)	81
Baltimore Med. College	(1906)	82
University of Maryland	(1906)	86
Johns Hopkins Medical School	(1905)	89
St. Louis College of P. and S.	(1898)	77
Leonard School of Medicine	(1906)	76
Medical College of South Carolina	(1897)	86
Meharry Med. Coll., (1902) 78; (1906) 89; (1907) 75, 75, 80, 82, 83, 84, 87, 89.		
Vanderbilt University	(1906)	90
Chattanooga Med. Coll	(1907)	78, 78
University of the South	(1906)	82, 83
University of Virginia	(1907)	82
FAILED.		
Atlanta College of P. and S.	(1907)	66, 68, 74
Atlanta School of Med.	(1907)	73
Leonard School of Med.	(1906)	73
Chattanooga Med. Coll. (1896) 60; (1901) 50, 59; (1903) 70; (1907) 66, 73.		
University of the South	(1906)	73
Meharry Med. Coll.	(1907)	73

At the examination held at Augusta, May 2-3, the total number of candidates examined was 23, all of whom passed. Five reciprocal licenses were granted at this examination and two old practitioners were registered under the exemption clause. The following colleges were represented:

College.	Year Grad.	Per Cent.
PASSED.		
Medical Coll. of Georgia (1907), the grade of 77 was reached by two, 78 and 79 by one each, 80 by three, 81 by two, 82 by three, 84, 85 and 86 by one each, 87 by four, and 89 by one.		
Maryland Med. Coll.	(1905)	84
University of Maryland	(1898)	81
Gate City Med. Coll.	(1907)	82
LICENSED THROUGH RECIPROCITY.		
College.	Year Grad.	Reciprocity with.
Louisville Med. Coll.	(1904)	Kentucky
Baltimore University	(1903)	Nevada
University of Michigan	(1885) Iowa; (1895)	Michigan
St. Louis University	(1904)	Kentucky
REGISTERED UNDER EXEMPTION CLAUSE.		
Atlanta Med. Coll.	(1886)	
Med. Coll of Georgia	(1888)	

Illinois April and May Reports.—Dr. J. A. Egan, secretary of the Illinois State Board of Health, reports the written examinations held at Chicago and East St. Louis, April 17-19, and May 8-10, 1907, respectively. The number of subjects examined in was 16; total number of questions asked, 100; percentage required to pass, 75.

At the examination held at Chicago, April 17-19, the total number of candidates examined was 40, of whom 31 passed and 9 failed. The following colleges were represented:

College.	Year Grad.	Tot. number exam.
PASSED.		
Denver and Gross Coll. of Med.	(1906)	1
Howard University	(1906)	1
American Med. Miss. Coll.	(1906)	2
National Med. Univ., Chicago	(1907)	2
Northwestern University	(1, 1898); (1, 1906)	2
Rush Med. Coll.	(2, 1906); (15, 1907)	17
Indiana Med. Coll.	(1906)	1
Michigan Coll. of Med. and Surg.	(1901)	1
University of Michigan	(1886)	1
Imperial University, Moscow, Russia	(1898)	1
University of Vienna, Austria	(1902)	1
Uniwersytet Jagiellonski, Krakow, Austria	(1894)	1
FAILED.		
Hahnemann Med. Coll., Chicago	(1899)	1
Jenner Med. Coll.	(1906)	2
National Med. University, Chicago	(1, 1906); (1, 1907)	2
Hospital Coll. of Med., Louisville	(1904)	1
Detroit Coll. of Med.	(1897)	1
Barnes Med. Coll.	(1899)	1
College of P. and S., New York	(1900)	1

At the examination held at East St. Louis, May 8-10, the total number of candidates examined was 104, of whom 97 passed and 7 failed. The following colleges were represented:

College.	Year Grad.	Tot. number exam.
PASSED.		
Bennett Coll. of Ecl. Med. and Surg.	(1907)	3
Chicago Coll. of Med. and Surg.	(1907)	4
Rush Med. Coll.	(1900)	1
Barnes Med. Coll.	(1907)	17
Homeopathic Med. Coll. of Missouri	(1, 1906); (2, 1907)	3
Marion Sims-Beaumont Med. Coll.	(1, 1906); (24, 1907)	25
Washington Univ., St. Louis	(1, 1905); (1, 1906); (21, 1907)	23
St. Louis Coll. of P. and S.	(1907)	20
Eclectic Med. Inst., Cincinnati	(1907)	1
FAILED.		
Dearborn Med. College	(1906)	1
Physio Medical College of Indiana	(1907)	1
Barnes Medical College	(1, 1903); (1, 1907)	2
St. Louis Coll. of P. and S.	(1, 1906); (2, 1907)	3

Massachusetts May Report.—Dr. E. B. Harvey, secretary of the Massachusetts Board of Registration in Medicine, reports the written examination held at Boston, May 14-16, 1907. The number of subjects examined in was 13; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 42, of whom 31 passed, including 7 osteopaths, and 11 failed. The following colleges were represented:

College.	Year. Grad.	Per Cent.
PASSED.		
American Med. Miss. Coll.	(1902)	78.3
Baltimore University	(1906)	75
College of P. and S., Baltimore	(1900)	82.9
Johns Hopkins Med. School	(1904)	82.8
Boston University	(1893) 79; (1896)	80.2
Harvard Med. School	(1906)	76.1
Tufts College Med. School	(1906) 76.2, 79.4	
College of P. and S., Boston	(1906)	75.2
Dartmouth Med. Coll.	(1901) 76; (1904) 81; (1907) 77, 82.1, 85.1	
College of P. and S., New York	(1904) 85.3; (1905)	85
Woman's Med. Coll of Pennsylvania	(1903)	84.5
Univ. of Vermont	(1899) 75; (1905) 79.2; (1906)	84.4
Laval University, Quebec	(1902)	75
McGill University, Quebec	(1905)	84.4
Aberdeen University, Scotland	(1906)	82.2
FAILED.		
Kentucky School of Medicine	(1906)	73.7
Baltimore University	(1903) 55; (1906)	71.9
College of P. and S., Boston	(1905)	65.7
Baltimore Med. Coll.	(1905)	72.6
Tufts College Med. School	(1898)	64.5
College of P. and S., St. Louis	(1906)	54.5
Dartmouth Med. Coll.	(1893)	57
Laval Univ., Quebec	(1904) 56.7; (1905) 56.5; (1906)	59.5

Delaware June Report.—Dr. P. W. Tomlinson, secretary of the Medical Council of Delaware, reports the written examination held at Dover, June 18-20, 1907. The number of subjects examined in was 10; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 4, of whom 3 passed and 1 failed. Four reciprocal licenses were granted. The following colleges were represented:

College.	Year. Grad.	Per Cent.
PASSED.		
Maryland Medical College	(1907)	81.5
Woman's Med. College of Pennsylvania	(1907)	90.7
Jefferson Medical College	(1907)	81.6
FAILED.		
Maryland Medical College	(1907)	62.5

LICENSED THROUGH RECIPROCITY.

College.	Year Grad.	Reciprocity with.
Southern Homeo. Med. Coll., Baltimore	(1906) (1907)	Maryland
Jefferson Med. College	(1906)	Maine
Chattanooga Medical College	(1905)	Tennessee

Maryland Homeopathic June Report.—Dr. Joseph S. Garrison, secretary of the Board of Medical Examiners representing the Maryland State Homeopathic Medical Society, reports the written examination held at Baltimore, June 4-5, 1907. The number of subjects examined in was 9; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 15, of whom 14 passed and 1 failed. Three reciprocal licenses have been issued since the beginning of the year. The following colleges were represented:

College.	Year. Grad.	Per Cent.
PASSED.		
Southern Homeopathic Med. Coll., Baltimore	(1907) 81.1, 82.7, 84.4, 86.7, 86.8, 89.2, 90.5, 92.2, 93.4.	
Hahnemann Med. Coll., Philadelphia,	(1897) 81.4; (1899) 79.2; (1907) 87.3, 91.2, 96.	
FAILED.		
Southwestern Homeopathic Med. Coll., Louisville	(1906)	61.2

LICENSED THROUGH RECIPROCITY.

College.	Year Grad.	Reciprocity with.
Hahnemann Med. Coll., Chicago	(1906)	Illinois
Chicago Homeopathic Med. Coll.	(1889)	Illinois
Pulte Med. Coll.	(1905)	Ohio

Medicolegal

Another Court on Injuries Caused by Fright

The Supreme Court of Rhode Island says, in the personal injury case of Simone vs. Rhode Island Company, that the question has not heretofore been determined in that state whether there can be a recovery for bodily injury caused by fright when the fright was caused by the negligence of the defendant; where there was no actual physical injury at the time of the accident, but where the fright was followed by a series of physical ills as its natural consequence; where the fright as a cause gave rise to nervous disturbances, and those in turn to physical troubles. The cases relating to this question in other jurisdictions have given rise to widely differing decisions. This court decides it in the affirmative. It says that it is always a question, frequently of much difficulty to be decided in the particular case, whether the injury for which damages are sought is the proximate result of the act or acts complained of. But when it is admitted that in a large class of cases there may be injuries of the most serious character directly resulting from the negligence of the defendant, as a proximate cause, for which the law will afford no remedy because of some probable difficulty or occasional injustice in the administration of a more liberal rule, it appears to the court that the conclusion is quite illogical and is a pitiful confession of incompetence on the part of courts of justice.

Experts May be Asked Leading Questions.

The Court of Civil Appeals of Texas says, in Galveston, Harrisburg & San Antonio Railway Company vs. Powers, that it is ordinarily permissible to ask an expert witness a leading question when his opinion is sought on a matter about which, by reason of his professional knowledge and skill, he has peculiar information.

Evidence That Injury Caused Tuberculosis.

The St. Louis Court of Appeals says that, in the personal injury case of Van Cleve vs. St. Louis, Memphis & Southeastern Railroad Company, objection was made to a physician testifying that the plaintiff had tuberculosis of the lungs, which, in his opinion, was caused by a fall in November, 1902, when he did not see her until Dec. 24, 1904. It was contended that as he did not see her until such latter date, her condition when he saw her was too remote from the injury for him to form any correct opinion, and any opinion he might form would be simply theoretical. But the court does not think that there was any error in overruling the objection. It says that the physician testified that the consumptive condition of the plaintiff's lungs probably resulted from the injury. This evidence, in connection with that of the plaintiff, to the effect that she had been a strong and healthy woman before the injury, had never had lung trouble, and that after the injury she continued to have hemorrhages of the lungs down to the day of the trial, the court thinks tended very strongly to show that, if she had tuberculosis of the lungs, it was a natural and probable result of the injury, and for this reason evidence of her consumptive condition was admissible without being specially pleaded; in other words, that it was a condition which the defendant might have anticipated and been prepared to meet on the trial. If the defendant was in doubt as to what the plaintiff expected to prove under the general allegation of permanent injury, it was its privilege to have called for particulars.

Validity of Laws Providing for Commitment of Insane.

The Supreme Court of Rhode Island says, in re Crosswell's petition, that the petition was for a writ of habeas corpus and for discharge from custody of a patient confined against his will in the Butler Hospital. The commitment and reception of the petitioner at the hospital were under the provisions of the Rhode Island statute that insane persons may be removed to and placed in said Butler Hospital, or in any other curative hospital for the insane of good repute in the state, managed under the supervision of a board of officers appointed under the authority of the state, by their parents, or parent, or guardian, if any they have, and if not, by their relatives

and friends; but the superintendent of said hospital shall not receive any person into his custody in such case without a certificate from two practicing physicians of good standing, known to him as such, that such person is insane, and the state shall not be liable for the support of any such person.

The statute, the court goes on to say, does not require that the certificate mentioned should be sworn to or that it should be signed by physicians practicing in Rhode Island, or that they should not be officers of an institution for the care of the insane, or that the removal shall be from another hospital. These objections, urged against the validity of the certificate in the present case, have no basis in the statute. The certificate fulfilled the requirements of the law. The power given to parents or guardians so far as it relates to minors or wards, is only a recognition of the power which Nature gives to the one class and the courts have bestowed on the other.

Furthermore, the court thinks that this statute should be held to include in the word "guardian" those of foreign as well as domestic appointment. Many of the patients in the Butler Hospital are not citizens of Rhode Island, and the court can not narrow the construction of so comprehensive a statute, and construe it so as to require in many cases the appointment of a local guardian before a person needing the care of this institution could be committed to it.

The court finds in this case as matter of fact, on the concurrent testimony of all the expert witnesses, that the petitioner was insane; and on uncontradicted evidence, that his malady was in its nature progressive, and that it was liable at any time, without warning, to induce in him acts of violence to himself or others. In these circumstances the court says it was clear that for his own good, as well as for the protection of the community, he required restraint and medical care such as the Butler Hospital affords and for the purpose of furnishing which it was incorporated and authorized by law to receive patients.

It seems to the court that much popular misapprehension of this subject grows out of the feeling that constraint of a person as insane is analogous to the punishment of a criminal, and carries with it some stigma; and to this may be added in some minds a repulsion to submitting one's self or one's friend to hospital treatment away from the continued supervision of family and personal friends. But insanity is a disease, and the state has the right to treat one who has the misfortune to suffer from it, as it does one who has a contagious malady. The exercise of this right of self-protection must be regulated by the circumstances of the case. If it is dangerous to the community that a citizen should go at large, whether because he is liable to spread contagion, or to commit some act of violence, public safety demand that he be immediately confined, either with or against his will, and the extent of his personal right can only be to test by judicial process, at a time when it may safely be done, the propriety of his restraint. The court is of the opinion that the safeguards of this right provided by the statute are ample and just.

The person confined has two methods at his command of invoking the action of the highest judicial authority, and severe penalties are imposed on the managers and guards of the institution if they fail to bring the remedial provisions of the statute to his notice or impede his access to the remedies provided. In addition to this, careful supervision of such institutions is provided for by citizens of character and standing, and the system of operation is so regulated by law as to prevent abuses, or to insure the correction of them, as far as wise legislation can go. It would serve no useful purpose in this case to compare the systems which have been adopted in other states for securing the restraint of the dangerously insane. Many of them were criticised by the plaintiff's counsel as liable to the same strictures which he applied to those of Rhode Island. They are all attempts by different minds to protect the community by such measures as may least infringe the personal liberty of the insane person. The court thinks that the Rhode Island system is a reasonable exercise of the legislative power, and secures to the subject of its restraint all rights which the Constitution of the United States guarantees to him.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York.

July 13.

1 Treatment of Intracranial Tumor. W. M. Leszynsky, New York City.
2 *Importance in Surgical Cases of Correcting Defective Unstriped Fiber. A. T. Livingston, Jamestown, N. Y.
3 Large Tumor of Laryngopharynx Removed by Subhyoid Pharyngotomy. W. F. Chappell, New York.
4 Case of Typhoid Perforation of Appendix. H. Moffatt, Yonkers, N. Y.
5 *Paraplegia Caused by Aneurism of Arch of Aorta. B. Stow, Blackwell's Island, N. Y.
6 Vaginal Implantation of Adeno-carcinoma of Uterus. Blood Metastases in Recurrent Sarcoma. G. W. Kaan, Boston.
7 *Heart Disease and Blood Pressure. L. F. Bishop, New York.

2. **Importance of Correcting Defective Unstriped Fiber.**—Livingston believes that defective unstriped muscle fiber is the cause of many serious conditions that are met with by the surgeon. If this defective unstriped muscle is taken care of we shall be assured of safety in anesthesia, relief from shock, freedom from pain or its modifications, avoidance of inflammation and repair of injured tissues, and of much increase of comfort and well-being to the patient. The defective unstriped muscle fiber that is implicated is that of the blood vessels especially. Heart weakness is due to the improper distribution of blood in the vessels, resulting from weakness of the blood vessel's muscular coat at some point. Correcting this weakness will equalize the pressure and relieve the heart from undue strain. The means recommended for this correction are massage, dry cupping, electricity in the form of galvanism, cold, and, best of all, ergot. The last should be given cautiously, yet without fear of ergotism. Its use should be hypodermic, with a sterile solution and syringe, and should be rather preventive than curative.

5. **Paraplegia Caused by Aneurism of Aorta.**—Stow describes a case seen by him of large aneurism of the arch of the aorta, with erosion of the second, third, fourth and fifth dorsal vertebræ, in which there was paraplegia. There was concentric hypertrophy of the left ventricle and chronic syphilitic endarteritis, with calcareous degeneration of the aorta. The rupture of the aneurism occurred behind, owing to a pleuritis, which made the anterior walls resistant to the pressure of the tumor.

7. **Heart Disease and Blood Pressure.**—Bishop regards physiologic re-education as of great value in the cure of functional cardiovascular disease. There must be persistent measures undertaken, covering weeks, or even a year; but excellent results may be obtained even where compensation is destroyed. The first thing to accomplish is relief from worry and mental concentration for the patient. Next comes reduction of diet, including taking away of the sweets and red meats. Exercise should be carried on systematically, whether the patient wants it or not, except in those cases in which failing compensation necessitates a short stay in bed.

New York Medical Journal, New York.

July 13.

8 *Subcutaneous Rupture of Spleen. E. Eliot, Jr., New York City.
9 *Acoustic Limitations of Stethoscope and Their Clinical Importance. L. A. Conner, New York City.
10 Pneumothorax. J. G. Beardsley, Philadelphia.
11 Craving for Sweets in Diabetic Patients. A. A. Ripperger, New York.
12 *Incomplete Forms of Exophthalmic Goiter in Relation to Gastrointestinal Disease. J. P. Sawyer, Cleveland, Ohio.
13 *Gastric Cancer Producing Gastrocutaneous Fistula. A. E. Taussig, St. Louis.
14 Diagnosis by the Nose. E. C. Hill, Denver.
15 *Comparative Inocuousness of Foreign Bodies in Three Instances. J. A. McKenna, Lansdowne, Pa.

8. **Subcutaneous Rupture of Spleen.**—Eliot reviews briefly the literature on this subject and reports two personal cases. Splenectomy was done in both cases over a year ago. Both patients are well and healthy.

9.—See abstract in THE JOURNAL, May 18, 1907, page 1713.

12. **Incomplete Forms of Exophthalmic Goiter.**—In the last 600 cases observed by Sawyer 54.8 per cent. have shown one or

more of the ocular signs (usually von Graefe's); tremor of the type described by Marie; with tachycardia present and referable to no other cause, or with history of decided palpitation, paroxysmal and disturbing, and the great majority shows either a visible fulness of the thyroid gland or at least a decidedly greater than normal fulness on palpation. In a few cases only was the thyroid not palpable with ease, when the tremor and ocular signs were present. The digestive disturbances were of manifold variety, but in many cases furnished a large part of the patients' complaint. All degrees of disturbed secretion from achlorhydria to high hyperchlorhydria secretion of typical gastrosuccorrheal type were present. Moreover, these patients on repeated tests showed very variable composition of stomach contents as to chemical and ferment activities.

Among the physical signs which Sawyer has noted in these cases quite frequently is a peculiar distribution of hair. In a great number of these cases the eyebrows are very scanty, either throughout their whole extent or especially in the outer half of the brow, lashes scanty, oftentimes the axillæ are more than usually free from hair as also over the legs the usual growth is absent. Moreover, the hair of the head in many of these patients seems to be divided into two zones; and the lower and narrower zone running around the lower edge of the growth of the hair of the temporal and occipital regions is apt to show a gray zone, sometimes a fringe of white, before a change of color is noticeable in the superior zone, or in younger patients, this zone of hair is scanty. In a few patients he has seen this peculiarity of pigment reversed. This one feature has often suggested to Sawyer the probable existence of exophthalmic goiter in the lesser forms and has caused him to look for recognizable signs.

He also calls attention to the importance of the vasomotor disturbances with relation to the surrounding atmospheric conditions, and suggests the likelihood of all the paroxysmal phenomena in a given case being precipitated by the existence of a high relative humidity. Sawyer has employed arsenic, iodids, bromids and adrenalin in the treatment of these patients, but considers such drugs of secondary value when contrasted with physical measures of environment, climate hydrotherapy, electricity and massage. Thyroidectin and the antithyroidin of Moebius he has used successfully in hundreds of cases.

13. **Gastric Cancer Producing Fistula.**—In the case reported by Taussig, the fistula followed an exploratory laparotomy, which was done about a year after the patient noted the first symptom. The case ran the usual course, the patient dying about 18 months after the onset of this trouble. The tumor was an adenocarcinoma of the anterior wall of the stomach.

15. **Innocuousness of Foreign Bodies.**—Three cases in point are reported by McKenna. In the first case a small piece of wood had remained in the socket of the orbit for three months without causing the slightest reaction. It was finally forced to the surface, probably by muscular action, and was removed. The splinter was ⅞ inch long. In the second case a piece of glass entered the neck and remained there for three weeks, until its removal, without causing any discomfort. Each time the patient swallowed, a protuberance on the neck became more marked. This suggested the presence of the foreign body and led to its removal. The glass had entered the neck as the result of an accident. The third patient had swallowed a safety pin some six months previously, which apparently caused no trouble, except that the patient experienced the unpleasant sensation of chronic tonsillitis and a metallic or coppery taste. The tonsils were enlarged, one gland more than the other, and on attempting to remove the larger of the two the safety pin was discovered projecting from behind the tonsil.

Boston Medical and Surgical Journal.

July 4.

16 *Treatment of Retroversion. W. P. Graves, Boston.
17 *Neuralgia of Superior Maxillary Nerve. H. A. Lothrop, Boston.
18 *"Organism X," Probably of the Corynebacterium Group. L. Hoag, Boston.
19 Case of Painless Labor, Due to Destructive Lesion of the Spinal Cord. E. W. Taylor, Boston.
20 Case of Chronic Otitis Media, Hemorrhage into External Auditory Canal and Perforation of Wall of Pharynx. F. L. Jack and F. H. Verhoeff, Boston.
21 *Strange Reason for Persistent Abdominal Pain. F. Cobb, Boston.

July 11.

22 Segregation of Consumptives. J. F. A. Adams, Pittsfield, Mass.
23 Acidosis. E. P. Joslin, Boston.
24 *Nephrolithiasis. R. F. O'Neil, Boston.
25 *Nocturnal Paralysis. I. H. Coriat, Boston.

16. **Retroversion.**—As the result of a careful analysis of the clinical records of 500 consecutive cases of retroversion, and a personal letter to each patient inquiring early into the case, and the results of treatment, Graves concludes that in a case where the uterus can be easily replaced and will remain in position and there is no necessity of inspecting the abdominal cavity, Alexander's operation may be recommended. Where it is desirable to open the abdomen and where there are no excessive adhesions and no marked relaxation of the diaphragmatic support, Mayo's internal Alexander is the operation of choice. In cases of many adhesions and marked retroflexion, or with much sagging of the diaphragmatic support, the uterus should be attached to the abdominal wall in a manner so that it will stay, the exact method of attachment being a matter of choice by the individual surgeon, the question of future childbirths never being disregarded. Attachment of the uterus to the abdominal wall by a suture merely through the peritoneum is an inefficient method of ventral suspension. Intra-abdominal shortening of the round ligaments is an inefficient treatment for retroversion.

17. **Treatment of Neuralgia of Superior Maxillary.**—Lothrop considers only the second division of the fifth nerve for the purpose of suggesting a method of intercepting the nerve supply of the teeth of the upper jaw, when these branches are involved, and it is desired to resort to one of the so-called peripheral operations. The operation can be carried out by means of an incision inside the mouth, which exposes the canine fossa. The only claim made for the operation described is that cases of neuralgia of the superior maxillary nerve in which pain is referred to the teeth, as well as to the face, can be relieved by a superficial route. Two cases are reported in which the operation described was employed and both patients have secured complete relief from the pain. The operation is described in full.

18. **Organism X.**—Hoag describes an organism which closely resembles the xerosis, diphtheria, and other bacilli, which he found a number of times at autopsy, as well as during life; both in pure culture and mixed; in various pathologic lesions, and also when not associated with local disease. It was found conspicuously in the bronchopneumonic lung in the insane, and in pure culture in the sputum from a patient who showed clinical signs of bronchopneumonia. Hoag regards the organism x as a factor in disease, and promises a further contribution on the subject.

21. **Persistent Abdominal Pain.**—In the case reported by Cobb the pain was caused by a pin, which had penetrated the umbilicus and lodged itself in the omentum, causing extensive adhesions.

24. **Nephrolithiasis.**—O'Neil reports the case of a man who had a large-sized calculus in one kidney, without its presence being manifested, and without destroying the kidney. The Roentgen ray and the cystoscope proved invaluable in making a diagnosis in this case.

25. **Nocturnal Paralysis.**—Coriat reports the case of a woman who would awaken during the night and find that she was paralyzed. After a few minutes she would become fully conscious and then the sensation of paralysis disappeared, to be followed by a feeling of exhaustion. She had similar attacks for a month, when they became less frequent and finally disappeared entirely. Subsequently the attacks reappeared. She awakened in the early morning with a choking sensation and a feeling of suffocation, with palpitation of the heart and complete inability to move the body. The hands were usually clasped and extended above the body. During the attacks she was fully conscious, but was unable to open her eyes or move her limbs, even by the strongest exercise of will. There was

no amnesia or haziness of memory after each attack. She would cry out for aid to move her arms or limbs, but until such aid was given she was unable to make any muscular movement whatever. The attacks usually lasted from two to five minutes before aid was given.

Psycho-analytic methods yielded the following interesting data concerning the attacks: They began about three months after the death of her second child, who died on a Monday afternoon under distressing circumstances. This acted as a strong emotional shock. Although the child had been ill three weeks with pneumonia, yet his sudden death was unexpected. On this particular Monday afternoon the patient was alone and was holding the child in her lap. He suddenly reached the arms above the head, showed a general tremor, then became rigid and immediately expired. The position taken by the patient in her nocturnal paralytic attacks exactly resembled that taken by her child at the time of his sudden death, and furthermore, the worst attacks always occurred on Monday, the day of the week on which the child died. It seems, therefore, that this is a recurrent mental state originating in a sudden and distressing emotional shock.

The treatment consisted of waking suggestions, applied by means of a fictitious magnet (tuning fork) and directed toward a complete cessation of the attacks. This was given three times a week, and during the first month only seven attacks of palsy took place, whereas previous to the treatment they had occurred every night. These attacks, too, were much lighter; she was able to come out of each voluntarily and to move the paralyzed limbs. There have been no attacks since, a period of seven months. It can be safely assumed that the patient has entirely recovered.

The Lancet-Clinic, Cincinnati.

July 13.

26 Two Cases of Gallstones. J. H. Barnett, Pikeville, Tenn.
27 Eyestrain. T. W. Floyd, Peoria, Ill.
28 Use of Acetozone in Typhoid. R. T. Trimble, New Vienna, Ohio.

American Journal of Surgery, New York.

June.

29 One Thousand Abdominal Sections. M. I. Rosenthal, Fort Wayne, Ind.
30 Surgical Treatment of Uterine Fibroids. J. W. Barksdale, Vaiden, Miss.
31 *Operation in Appendicitis. H. Lilienthal, New York City.
32 Obliteration of Dead Space Following Perineal Extirpation of Rectum. J. M. Lynch, New York City.
33 Blood Examination in Surgical Diagnosis. (Continued.) I. S. Wile, New York City.
34 *Dislocation of Upper End of Fibula. F. B. Golley, Milwaukee.
35 Gonorrheal Invasion of Uterus and Fallopian Tubes. B. H. Wells, New York City.
36 Surgical Postures. (Continued.) M. W. Ware, New York City.
37 Nephroptosis. R. R. Kime, Atlanta, Ga.
38 Medicolegal Aspects of Ocular Injuries. P. Fridenburg, New York City.
39 Traumatic Neuroses. J. B. Morgan, Augusta, Ga.

31. **Operation in Acute Stage of Appendicitis.**—Lilienthal claims that it is preferable, as well as advisable, to operate during the acute stage of appendicitis rather than during the interval, because by operating on an individual whose appendix is diseased but quiescent, a practically well person is made sick. The system is obliged to array its forces to redress the surgical insult. On the other hand, the individual suffering from the acute disease is in a state of preparation for a more serious battle than that with the surgeon. To such a patient the operation comes as a comparatively little thing, and if no error of technic mars the surgeon's work, relief is immediate and convalescence speedy. Lilienthal says that the interval patient suffers more for the first 36 hours after the operation than does the one who has been operated on during the attack.

34. **Dislocation of Upper End of Fibula.**—Golley adds one case to 25 previously reported in the literature. The patient, a very muscular man, slipped and, after sliding, sprawling and twisting, finally landed in a sitting posture, with the left leg and foot directly under him. On examination Golley found an outward and forward dislocation of the upper end of the fibula, which became displaced as much as, or more than, the width of the bone, whenever the foot was flexed or extended. The luxation was readily reduced and the bones retained in place by means of a plaster-of-Paris bandage.

Northwest Medicine, Seattle.

June.

40 *Dementia Præcox as Defense for Crimes. W. T. Williamson, Portland, Ore.
41 Fallacy of Insanity as an Excuse for Crime. A. P. Duryee, Everett, Wash.
42 *Treatment of Extensive Burn with Rubber Tissue Dressing. P. W. Johnson, Clarkston, Wash.
43 Morphin, Hyoscin, Cactin Anesthesia. F. R. Underwood, Seattle, Wash.
44 Leprosy in Hawaii. P. R. Waughop, Seattle, Wash.

40. **Dementia Præcox as Defense for Crime.**—According to Williamson, the crimes that the dement may commit without responsibility are only those impulsive and unpremeditated acts that project themselves across his mental horizon, bursting unexpectedly out of the darkness, and quickly vanishing in the gloom.

42. **Rubber Tissue Dressing in Extensive Burn.**—After having tried all methods of treatment usually employed in burns of the third degree, without being able to relieve the patient of pain, Johnson finally resorted to the use of rubber tissue, which was made to fit the wound, as nearly as possible, without overlapping the healthy skin. The dressing proved to be even better than anticipated. When it was changed there was practically no pain, and no hemorrhage whatever. The granulations assumed a firm, healthy appearance and healing progressed rapidly. Johnson believes that the rubber tissue dressing prevents exhaustion, and probably eliminates this as a cause of death. Furthermore, there is a small amount of contracture.

Vermont Medical Monthly, Burlington.

June 15.

45 Care of Surgical Cases. H. C. Tinkham, Burlington, Vt.
46 *Commercial Therapeutics and Commercial Therapeutists. G. L. Bates, Morrisville, Vt.
47 *Erysipelas Followed by Confinement. L. J. Pons, Roxbury, Conn.

46. **Commercial Therapeutics.**—There are many points made and touched on in Bates' paper. Among these he mentions the Council on Pharmacy and Chemistry, whose work he commends very highly. The proprietary medicine question is reviewed in the same manner as has been done by many others, and Bates agrees that the cure lies in a better knowledge of materia medica and pharmaceutical chemistry, a more thorough study of the pharmacopeia, and a better knowledge of prescription writing.

47. **Erysipelas Followed by Confinement.**—Pons reports a severe case of erysipelas occurring in a gravida, who was delivered about five weeks after the commencement of the erysipelas, and shortly after recovery from the disease. The labor was normal, and the patient made an uneventful recovery.

Archives of Pediatrics, New York.

June.

48 *Possible Etiologic Factors in Recurrent Vomiting of Children. J. Howland and A. N. Richards, New York City.
49 Tuberculous Cervical Lymph Nodes in Infant. L. E. La Fétra, New York City.
50 *Sacral or So-called "Mongolian" Pigment Spots of Infancy, Especially in American Negro. J. Brennemann, Chicago.
51 *Pyelitis in Infancy and Childhood, with Remarks on Urine. L. Fischer, New York City.
52 Spasm of Glottis Complicating Whooping Cough. M. O. Magid, New York City.

48. **Recurrent Vomiting of Children.**—Howland and Richards have made this the subject of careful clinical and experimental study. They conclude that a shock is exerted on an unstable nervous system, and that as a result of this, in some unknown way, a diminished power of oxidation results, and the organism loses the power to detoxify substances absorbed from the intestine, which have been present there in excess. These circulate in the blood exerting their poisonous action and can not be excreted by the kidneys, because they are not brought to them in the proper form. It seems probable that they are excreted and reabsorbed by the stomach and intestine, in the light of which vomiting would appear to be eliminative and thus a protective mechanism.

50. **Sacral Pigment Spots in the American Negro.**—Brennemann reviews briefly the literature of this subject, and records

personal observations on children of the American negro. He examined 40 colored children under one year of age. Of this number 35 showed well-marked areas of bluish pigmentation at the time of examination. He says that these spots can no longer be considered as exclusive race characteristics, and that their presence or absence, in given cases, leads to highly probable but not positive determination as to race or to degree of contamination.

51. **Pyelitis in Infancy.**—A review of four cases reported by Fischer shows that pyelitis presents a variety of symptoms resembling intermittent fever, with marked exacerbations and remissions in the temperature, and that pyelitis is met occasionally in infancy, as an afebrile type. He advises frequent examination of the urine, both morning and evening specimen.

California State Journal of Medicine, San Francisco.
June.

53 Specific Therapy in Tuberculosis. G. H. Evans, San Francisco.
54 Earthquake Shock in Production of Nervous and Mental Disease. J. W. Robertson, Livermore.
55 Analysis of Stomach Contents. B. Reed, Los Angeles.
56 Pure Milk Question in California. G. H. Kress, Los Angeles.
57 Symptoms and Diagnosis of Hip Joint Disease. P. C. H. Pahl, Los Angeles.
58 *Anomalies of Sigmoid Colon Resembling Diverticula. J. C. Blair, San Francisco.
59 Treatment of Neurasthenia. D. R. Smith, San Francisco.
60 Infantile Paralysis. J. T. Watkins, San Francisco.

58. **Anomalies of Sigmoid.**—Blair reports two cases, seen at the postmortem. The first case was diagnosed as one of carcinoma of the liver, but no tumor was found at the necropsy, although the liver was enlarged considerably. At the point where the sigmoid normally begins, the intestine turned abruptly on itself and ran upward toward the transverse colon, then to the right, and down again. The description of both these cases is so full and made in such detail that it is impossible to embody them in a brief abstract.

Iowa Medical Journal, Des Moines.
June.

61 Thrombosis and Embolism. E. B. Rogers, Waterloo.
62 *Surgical Curiosities. F. S. Hough, Sibley.
63 Hydrotherapy for the Insane. R. B. Wright, Chicago.
64 Nuclein. E. S. Heilman, Ida Grove.
65 General Anesthesia. L. P. Piper, Valley Junction.

62. **Surgical Curiosities.**—The first case reported by Hough was one of sarcoma of the spleen, diagnosed as a case of splenic anemia. A splenectomy was done, and the patient did well for a time. Then the tumor recurred, and it was at this time that a correct diagnosis was made. The second case was one of cyst of the pancreas, which for a number of years had been looked on as a case of gallstone disease. The third case was one of gonorrheal arthritis of unusual severity; the fourth, a case of appendicitis in which an enormous abscess formed, which had been diagnosed as ovarian cyst; fifth, a case of large abscess in the upper right quadrant of the abdomen, the result of a suppurative appendicitis; two other cases of appendicitis, in which some rather curious features presented themselves, and the last case was one of axillary abscess, which discharged into the bronchus without the formation of a pleural abscess.

Journal of Infectious Diseases, Chicago.
May.

66 Use of Methylene Blue in Testing Sewage Effluents. E. B. Phelps and C. E. A. Winslow, Boston.
67 Application to Soft-Water Sewage of Direct Processes for Determination of Kjeldahl Nitrogen and Nitrogen as Free Ammonia. H. B. Hommon, Waterbury, Conn.
68 Rapid Detection of Gelatin Liquefaction in Determination of *B. coli*. S. D. Gage, Lawrence, Mass.
69 Use of Lactose-Bile Medium in Water Analysis. D. D. Jackson, Brooklyn.
70 Lactose-Bile Medium for Detection of *B. coli* in Water. L. R. Sawin, Mt Kisco, N. Y.
71 Comparative Results Obtained by the Use of Lactose-Bile and Dextrose-Broth Media for Detection of *B. coli* in Water. R. S. Weston and R. E. Tarbett.
72 Sanitary Chemical Examination of Water Bacteria. A. W. Sellards, Urbana, Ill.
73 *Relative Importance of Streptococci and Leucocytes in Milk. N. M. Harris, Chicago.
74 Leucocyte Standards and Leucocyte Content of Milks from Apparently Healthy Cows. H. L. Russell and C. Hoffmann, Madison, Wis.
75 Comparative Value of Bacterial and Temperature Regulations for a City's Milk Supply. F. H. Slack, Boston, Mass.
76 Comparison Between Bacteriologic Analysis of Air by Plate Method and by Filters. G. A. Soper, New York City.
77 Agglutination Method of Diagnosis in the Control of Glanders. V. A. Moore and W. J. Taylor, Ithaca, N. Y.
78 Growth and Toxin Production of *Bacillus diphtheriæ* on Proteid-Free Media. P. B. Hadley, Boston.
79 Liberation of Formaldehyd Through the Agency of Calcium Carbid. H. D. Evans.
80 Liberation of Formaldehyd Gas from Solution by Potassium Permanganate. G. B. Frankforter, Minneapolis.
81 Sputum Shaking and Sedimenting Apparatus. Rabies Collecting Outfit. B. R. Rickards, Boston.
82 New Mosquito Cage. M. L. Price, Baltimore.
83 Action of Sunlight on Bacteria, Especially *B. tuberculosis*. J. Weinzirl, Madison, Wis.

73. **Importance of Streptococci and Leucocytes in Milk.**—Harris points out that the divergent views concerning so-called bacillus lactis acidi need early adjustment in order to promote settlement of certain phases of the milk problem. Pathogenic and non-pathogenic forms of streptococci in milk are not readily distinguishable by the present methods; pathogenic streptococci certainly grow at times in milk. The contamination then usually arises from cases of mastitis. He also indicates that the significance of the so-called pus cell in milk has been overrated and that the phenomenon of lactic leucocytosis should be given great scientific attention. Furthermore, that the inspection and care of udders demand more attention and that less absolute dependence should be placed on examination of the milk for signs of infectious processes. He advocates throwing open of the whole question for discussion and for framing of new rules.

The Therapeutic Gazette, Detroit.
June.

84 *Treatment of Burns. W. L. Estes, South Bethlehem, Pa.
85 *Id. W. Lathrop, Hazelton, Pa.
86 *Id. A. W. Urmson, Newcastle, Pa.
87 *Id. J. E. Cannaday, Hansford, W. Va.
88 *Treatment of Burns in State Hospital for Injured, Fountain Springs, Pa. J. C. Biddle.
89 *Treatment of Burns and Scalds in Pottsville (Pa.) Hospital. J. H. Swaving.
90 Aural and Laryngeal Complications of Typhoid. L. S. Somers, Philadelphia.
91 Successful Treatment of Pulmonary Tuberculosis in General Practice. K. v. Ruck, Asheville, N. C.

84. **Treatment of Burns.**—Estes uses a warm sterile alkaline solution for the first dressing, or a 2 per cent. solution of carbolic acid, or a 1 per cent. suspension of creolin, followed by physiologic salt solution. He advises dressing large burns in sections rather than to expose the entire burned surface at one time. When a slough is present he has found the application of salicylic acid directly on the slough, gutta-percha tissue over this, and a dry, sterile dressing over all, very satisfactory, both as an efficient disinfectant and as a deodorant. When grafting must be resorted to he uses small bits of a thoroughly cleansed and bleached moist sterile sea sponge, applied in the same manner as a skin graft.

85. **Id.**—For burns of moderate severity Lathrop favors picric acid. For deep burns he uses picric acid, for five or six days, followed by vaselin on lint, with iodoform or acetanilid. Indolent and non-healing surfaces are treated by resin cerate.

86. **Id.**—Urmson also favors a picric acid dressing in burns of the first and second degree. In burns of the third degree picric acid is applied for 24 hours, and then some sterile powder, usually aristol. When there is deep sloughing he employs an immersion bath of a 1 to 12,000 solution of bichlorid of mercury at body temperature. The use of carron oil he has abandoned entirely.

87. **Id.**—Cannaday cleanses the burned area with physiologic saline solution, and then applies sterilized petrolatum and a light gauze dressing. If pus appears it is removed by irrigation, and the part affected is touched with a weak solution of iodin. In the operation of skin grafting, a modified Thiersch method is usually employed. Certain cases of superficial burns are treated according to Sneve's method.

88. **Id.**—Biddle uses a mixture consisting of carbonate of lead, one pound; powdered acacia, 6 ounces; bicarbonate of soda, 3 drams, and a sufficient quantity of linseed oil to make a thick creamy paste. This is spread on lint or Canton flannel, then cut into strips and applied to the burnt surface. After all the blisters have been cut open, the shreds of cuticle removed and the burned area is washed with soap and water. He does not advise frequent dressing, except when suppuration

occurs. The treatment is continued until the surface is covered by granulations, when a petrolatum dressing or powdered stearate of zinc is applied.

89. **Id.**—No matter how severe the burn, Swaving washes the burnt area with a warm solution of boric acid, salt or sterile water, preferably the latter. Large vesicles are incised and then a picric acid dressing is applied. After all sloughing has ceased he applies an ointment consisting of equal parts of zinc ointment, bismuth formic ointment and petrolatum.

Illinois Medical Journal, Springfield.

March.

92 Perineal Prostatectomy, the Operation of Choice. A. H. Ferguson, Chicago.
93 Exophthalmic Goiter. S. M. Miller, Peoria.
94 *Exophthalmic Goiter. F. Billings, Chicago.
95 *Ocular Signs and Symptoms of Exophthalmic Goiter. C. A. Wood, Chicago.
96 *Neurologic Complications of Exophthalmic Goiter. L. H. Mettler, Chicago.
97 *Medical Treatment of Exophthalmic Goiter. W. E. Quine, Chicago.
98 Rectal Diseases. F. C. Vandervort, Bloomington, Ill.
99 Non-tuberculous Vilious Arthritis. E. W. Ryerson, Chicago.
100 *Mastoiditis Following Acute Suppurative Otitis Media. J. Hollinger, Chicago.
101 Traumatic Rupture of Abdominal Viscera. D. N. Eisendrath, Chicago.
102 Case of Postdiphtheritic Hemiplegia. D. Hecht, Chicago.

April.

103 New Treatment for Trifacial Neuralgia. H. T. Patrick, Chicago.
104 Defects of Vision and Hearing in the Public Schools. J. W. Smith, Bloomington, Ill.
105 Inflammation of a Gall-bladder and Ducts. H. A. Millard, Minonk, Ill.
106 *Operative Treatment in Fractures Presenting Obstacles to Reduction. W. Fuller, Chicago.
107 Pathology of Vesical Tumors. J. A. Patton, Chicago.
108 Treatment of Congenital Syphilis in Infancy. I. A. Abt, Chicago.
109 *Tubercular Spondylitis in Infancy and Childhood. J. H. Hess, Chicago.
110 Case of Sarcoma in Childhood. W. K. Newcomb, Champaign, Ill.
111 Medical Ophthalmoscopy. J. F. Burkholder, Chicago.
112 *Treatment of Blennorrhea of the Lachrymal Sac. W. O. Nance, Chicago.

May.

113 *Treatment of Acute Mastoiditis Due to Scarlet Fever, Diphtheria and Influenza. W. L. Ballenger, Chicago.
114 *Influenza; Complications of Nervous System with Treatment. W. G. Stearns, Chicago.
115 *Etiology of Scarlet Fever. L. Hektoen, Chicago.
116 *How to Prevent Spread of Infection in Scarlet Fever. H. Spalding, Chicago.
117 *Course, Symptoms and Diagnosis of Scarlet Fever. J. M. Dodson, Chicago.
118 Congenital Stenosis of Pylorus. J. H. Rice, Quincy, Ill.
119 *Vaginal Drainage for Pelvic Pus. H. T. Byford, Chicago.
120 *Abortion, with Special Reference to Incomplete Abortions. A. R. Small, Chicago.
121 *Need of Publicity in Venereal Prophylaxis. D. Lewis, Chicago.

June.

122 *Medicine of the Future (President's Address). J. F. Percy, Galesburg, Ill.
123 *Relation of Tonsillitis to Rheumatism. E. F. Ingals, Chicago.
124 Tubercular Infections of the Faucial Tonsil. C. M. Robertson, Chicago.
125 Case of Acne Varioliformis Treated by Wright Vaccination Method. E. H. Ochsner and H. W. Abelmann, Chicago.
126 Abortion. H. A. Pattison, Benld, Ill.
127 Affections of the Eye in Gastrointestinal Diseases. C. A. Wood, Chicago.
128 Metabolism as Affected by Disorders of the Stomach and Intestines. R. W. Webster, Chicago.

94.—See abstract in THE JOURNAL, Jan. 26, 1907, page 349.

95, 96, 97.—See abstracts in THE JOURNAL, Jan. 26, 1907, page 350.

100.—This article also appeared in the Chicago *Medical Recorder*, Dec. 15, 1906.

106.—See abstract in THE JOURNAL, June 23, 1906, page 1965.

109.—See abstract in THE JOURNAL, June 9, 1906, page 1786.

112.—See abstract in THE JOURNAL, June 23, 1906, page 1965.

113, 114.—See abstracts in THE JOURNAL, March 9, 1907, page 898.

115.—This article appeared in full in THE JOURNAL, April 6, 1907, page 1158.

116, 117.—See abstracts in THE JOURNAL, March 16, 1907, page 969.

119.—See abstract in THE JOURNAL, Jan. 26, 1907, page 351.

120.—This article also appeared in the *American Journal of Surgery* for May, 1907.

121.—See abstract in THE JOURNAL, June 22, 1907, page 2151.

122.—See abstract in THE JOURNAL, June 22, 1907, page 2151.

123.—See abstract in THE JOURNAL, April 20, 1907, page 1372.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London.

June 29.

1 *Tumors of the Jaws. F. Eve.
2 *New Method of Dealing with Cleft Palate. F. N. G. Starr.
3 *Severe Hemoptysis Treated by Icebag. H. Downes.
4 *Goiter Operations Under Local Anesthesia. A. J. F. Clarke.
5 Eclectic Treatment of Lupus Vulgaris. J. G. Tomkinson.
6 Surgical Tuberculosis and Opsonic Index. J. Stark.
7 Acute Colitis. F. Hernaman-Johnson.
8 Relapses in Enteric Fever. H. C. Hamilton.
9 Sudden Death in Infants. J. A. Smith.
10 Case of Bronchial Diphtheria. G. E. Bellamy.
11 Colocynth Poisoning. T. L. Butler.

1. **Tumors of Jaws.**—Eve has removed the upper jaw in five consecutive cases, with primary ligature of the external carotid and laryngotomy, without a death. One patient died of gangrene of the lung, the external carotid having been tied without laryngotomy. All told, Eve has removed the maxilla twelve times with only two fatalities. In no case was there secondary hemorrhage, either from the cavity in the mouth or the external carotid. The method employed is described in full. Eve says that when, in cases of disease of the maxilla requiring its removal, the mucoperiosteum of the hard palate is not involved, he has with considerable advantage preserved it by carrying an incision along the inner surface of the teeth on the affected side, and reflecting the mucoperiosteum toward the middle line, as was suggested by Watson-Cheyne. The maxilla is then removed in the ordinary way, and the edge of the flap of mucoperiosteum is stitched to the cut edge of the mucous membrane of the cheek. The roof of the mouth is thus restored.

2. **New Operation for Cleft Palate.**—Starr does a modified Langenbeck operation. The first lateral incision is carried well out to the alveolar margin of the hard palate, beyond the anterior extremity of the cleft. The mucoperiosteum is then denuded, and by snipping the palate aponeurosis from the posterior margin of the hard palate the flap is freed from its bony attachments. The same is done on the other side. The edges of the flaps are then paired and the flaps sutured with horse hair, commencing at the anterior angle of the wound. An aluminum splint is wrapped around these flaps and fixed with a few sutures. The splint is left in for eight or nine days, and the stitches are then taken out. The splint relieves the tension on the sutures, prevents the patient sucking the stitches, and minimizes the danger of infection from the mouth.

3. **Icebag in Hemoptysis.**—Downes reports the case of a man who lost 153½ ounces of blood in nine days, the greatest amount in one day being 31 ounces. The usual methods employed for checking hemoptysis proved futile, but immediately on applying an icebag over the suspected lung, all bleeding stopped, and not a single drop of blood was expectorated from then on. All drugs were stopped and the icebag kept in place for six days.

4. **Goiter Operations Under Local Anesthesia.**—Clarke has employed with much satisfaction the Barker method of inducing local anesthesia in the removal of goiters. The solution employed consists of sodium chlorid, 12 grains; beta eucain, 3 grains; water, 3½ ounces. This is boiled and then 10 minims of commercial adrenalin solution are added. The solution is ready for use as soon as cooled. Clarke does not advocate local anesthesia as a routine practice in goiter operations, but only for those patients whose condition makes general anes-

thesia risky, or for those surgeons who shrink from giving general anesthetics to patients of this class.

The Lancet, London.

June 29.

12 Plague. W. J. R. Simpson.
13 *Conservative Surgery of the Abdomen. C. R. B. Keetley.
14 *Influence of School Life on the Spread of Scarlet Fever. B. K. Goldsmith.
15 Rescue Work in Mines. T. Oliver.
16 Cerebral Abscess. J. M. Clarke.
17 Physical and Anatomical Explanation of Grocco's Triangle. F. W. Forbes-Ross.
18 *Loss of Tendo Achillis Reflex and Its Diagnostic Value in "Alcoholic" Failure of the Heart. R. T. Williamson.
19 Case of Splenic Abscess. R. H. Lucy.
20 *Rice and Beriberi. W. Fletcher.
21 The Introductory Gresham Lecture. F. M. Sandwith.

13. **Conservative Surgery of Abdomen.**—Keetley discusses particularly the appendix vermiformis and its relation to the surgical treatment of chronic constipation. He suggests that the practical treatment for those cases of constipation and the bacterial infection of the large intestine which are grave enough to appeal to surgery, is appendicostomy. He has performed this operation 16 times, 9 times for chronic constipation, in some of the cases amounting to complete obstruction at the time of operation. In no case did death or any apparent danger result from the appendicostomy.

14. **Influence of School Life on Spread of Scarlet Fever.**—This question was looked into very carefully by Goldsmith, the total number of cases involved being 19,219. He thinks there is little doubt that schools do assist in the spread of scarlet fever, although the influence exerted may not be very great. Furthermore, he found that two days is the medium latent period, closely followed by three days.

18. **Loss of Tendo Achillis Reflex.**—As an aid in diagnosis of alcoholic failure of the heart, Williamson found loss of the tendo Achillis reflex one of the first signs of the injurious action of alcoholic beverages on the peripheral nervous system, and that this reflex is often lost long before the knee jerk. In 100 cases of heart disease, not due to alcoholism, the tendo Achillis reflex was present in all but two of the cases, and in these two cases the loss of these reflexes was almost certainly due to early tabes. In alcoholic heart failure the tendo Achillis jerks were lost on both sides in 16 out of 21 cases; on one side in two other cases. They were both present in only three cases. Williamson is of the opinion, therefore, that it may be said safely that the tendo Achillis jerks are present in non-alcoholic heart disease, unless there is some nervous complication, but are usually absent in alcoholic heart failure, if the symptoms are well marked, and if edema and dyspnea are both present.

20. **Rice and Beriberi.**—Fletcher believes that uncured rice is either directly or indirectly a cause of beriberi, the actual cause being either a poison contained in the rice, deficiency of proteid matter, or uncured rice does not form a sufficiently nutritive diet and renders the patient's system specially liable to invasion by a specific organism, which is the cause of beriberi. Among 120 patients fed on uncured rice there were 43 cases of beriberi and 18 deaths. Among 123 patients fed on cured rice there were two cases of beriberi, and these both had the disease on admission. Ten patients suffering from beriberi who were placed on a diet of cured rice all recovered. Of 26 patients suffering from beriberi, who were not put on a cured rice diet, 18 died. Four patients who had been on a diet of cured rice for more than five months, and were apparently healthy, were transferred to a diet of uncured rice. Two of these patients developed beriberi within three months.

Journal of Tropical Medicine and Hygiene, London.

June 15.

22 Notes on Ova and Embryos of Schistosomum Cattoi vel Japonicum. R. T. Booth.
23 Malaria in Madagascar. W. C. Brown.

The Practitioner, London.

June.

24 Valvular Disease of the Heart. R. Crawfurd.
25 *Duodenal Ulcer. B. G. A. Moynihan.
26 *Pretuberculous Stage of Pulmonary Tuberculosis. J. J. Galbraith.
27 *Diagnosis and Cure of Presuppurative Stage of Amebic Hepatitis. L. Rogers.
28 Postpartum Hemorrhage. E. S. Bishop.
29 The Mulkowal Tetanus Case. W. J. Simpson.
30 *Retinal Embolism. C. O. Hawthorne.
31 Treatment of Dropsy by Deprivation of Salt. C. F. Hadfield.
32 Modern Leaders in Medicine. W. Jenner.

25. **Duodenal Ulcer.**—Moynihan's paper is a survey of what he has published elsewhere on the same subject.

26. **Pretuberculous Stage of Pulmonary Tuberculosis.**—Galbraith calls attention to the fact that the early physical signs of pulmonary tuberculosis do not correspond with the commencement of the disease and that for a prolonged period the disease is advancing from a deep-seated lesion and is causing a toxemia, setting up various symptoms and modifying the course of intercurrent diseases. The variety and continuance of these symptoms constitute a clinical picture which, when recognized by experience, should suggest the possibility of latent tuberculosis.

27. **Amebic Hepatitis.**—Rogers is of the opinion that all cases of this disease should be treated with large and repeated doses of ipecac, whenever there is any doubt remaining as to whether suppuration has already taken place or not, before any exploration of the liver is carried out, because this rule will prevent some unnecessary measures. He cautions against repeated puncturing of the liver with large aspirating canulas. He reiterates a belief expressed some time ago that the presence of leucocytosis in a marked degree is generally an indication that suppuration has taken place, and that in the slighter degrees it may be present in acute hepatitis without actual suppuration; further, that in this early stage the disease may sometimese be cured and suppuration prevented by the administration of large doses of ipecac.

30. **Retinal Embolism.**—Hawthorne reports two cases of retinal embolism, in which a normal standard of central visual acuity was retained.

The Clinical Journal, London.

June 12.

33 *Delayed Poisonings by Anesthetics. L. G. Guthrie.
34 Syphilis of Tongue and Cancer. C. Ryall.

June 19.

35 Developmental Disorders in Childhood. F. J. Poynton.
36 *Constipation in Infancy and Childhood. E. Cautley.
37 Treatment of Apoplexy. J. F. Palmer.

June 26.

38 Splanchnoptosis. C. M. Moullin.
39 Hoarseness. S. Thomson.
40 Mechanism of Asthmatic Dyspnea. F. Hare.

33. **Delayed Poisoning by Anesthetics.**—Guthrie summarizes his paper as follows: 1. Operations should be delayed when possible if a fatty liver be suspected. It may be suspected in subjects of rickets and infantile paralysis who have been overfed with fattening food and under-exercised; in cases of sepsis and diabetes, and when a history of cyclic vomiting is obtained. 2. When a child has recently vomited apparently without cause, an intended operation should be postponed. This precaution has been neglected in many fatal cases recorded. 3. When fatty liver is suspected the patient should be kept for some days on a diet restricted in fats. 4. Bicarbonate or citrate of soda should be given meanwhile in order to neutralize fatty acids which may be present. Mild purgation may be beneficial. 5. Starvation will give rise to acute acetonuria, therefore nutrient enemata should be given two hours before and immediately after an operation. 6. Although any general anesthetic may be dangerous in the presence of a fatty liver, chloroform is most dangerous of all on account of its specific action on the liver and kidneys. The treatment of acid intoxication following operations should be by venesection, saline transfusion, and by clysters of solution of bicarbonate of sodium.

36. **Treatment of Constipation in Children.**—The treatment of constipation by purgation at regular intervals is strongly condemned by Cautley. He favors hygienic measures, dieting, habit cultivation, massage, and general and abdominal exercises, assisted, if absolutely necessary, by simple drugs, such as olive oil and cod-liver oil which act mainly as lubricants. He regards as the most useful purges for children castor oil, rhubarb, sulphate of magnesia, jalap, calomel, gray powder or blue pills, and aloes, according to the parts of the intestine which it is especially desired to attack.

Medical Press and Circular, London.

May 29.

41 *Treatment of Pneumonia. J. Barr.
42 Treatment of Albuminuria and Eclampsia of Pregnancy. E. O. Croft.
43 Examination of the Urethra and Bladder by Electric Light. A. Fullerton.
44 *Common Salt-containing Waters in Gout. L. Williams.

June 5.

45 Developments and Dangers of Extrauterine Pregnancy. A. E. Giles.
46 Examination of Urethra and Bladder by Electric Light. A. Fullerton.
47 *Iodized Catgut. P. T. B. Beale and J. Clark.

June 12.

48 Foods and Feeding in Certain Conditions. S. West.
49 Successful Cesarean Section. C. Y. Pearson.
50 Passive Raising of Opsonic Index by Immune Serums. D. M. Paton.
51 Case of Late Rickets. J. A. Coutts.
52 Charcot's Disease of Knee Joint. J. P. Legg.

June 19.

53 Disorders of Micturition in Women. P. Horrocks.
54 Cerebrospinal Meningitis. F. M. Sandwith.
55 *Use of Massage in Treatment of Fractures. C. W. Cathcart.
56 *Cause of Heart Beat. G. A. Gibson.

41. **Treatment of Pneumonia.**—Barr's views on the treatment of pneumonia are so well known that it is not necessary to repeat what is stated in this clinical lecture.

44. **Treatment of Gout.**—Williams believes that chlorid of sodium, so far from being advantageous to the gouty, is liable, even in small quantities, to be very much the reverse.

47. **Iodized Catgut.**—Beale and Clark have used iodized catgut for a period of six months in practically all the surgical operations in vogue at the present time, and in every instance the results have been perfect. Even the skin was sutured with it, and in no case has there been the slightest irritation around the stitches or any of those troubles that are associated with imperfectly sterilized ligatures or suture materials.

55. **Massage and Movement in Treatment of Fractures.**—Cathcart favors massage and movement in the treatment of fractures. It should be done for a few minutes daily, combined with proper fixation, resorting at first to passive and then to active movement. Pain should never be caused. He says that massage hastens bony union, maintains the functional power of the muscles and minimizes adhesions.

56. **Cause of Heart Beat.**—After much clinical observation and pathologic investigation, as well as careful study and analysis of all the important contributions on the subject, Gibson has arrived at the conclusion that the view of Volkmann, that the pulsation of the heart is due to the automatic action of the intrinsic ganglia of the heart, is still a more satisfactory explanation of the facts than any other which has yet been advanced.

Presse Médicale, Paris.

57 (XV, Nos. 32-34, pp. 257-280.) *Fatal Hematemesis in Cirrhosis. (Hématémèse dans la cirrhose.) F. Mouisset and M. Beutter.
58 The Salicylic Ion. (l'Ion Salicylique.) P. Desfosses and A. Martinet.
59 *Acute Malarial Apical Affection. (Pneumopaludisme du sommet.) H. de Brun.
60 *Prolonged Retention of After-birth in Abortions. (Rétention prolongée de l'arrière-faix dans l'avortement.) R. Garipuy.
61 Leukemic Retinitis. (Rétinite leuc.) Rochon-Duvigneaud
62 Superficial Reflexes in Their Relations to the Deep Reflexes in Tabes. (Réflexes cutanés et réflexes tendineux, etc.) Nolca and Strominger

57. **Fatal Hematemesis in Cirrhosis.**—A case is reported of the typical syndrome of "anascitic cirrhosis of the liver" described by Gilbert. The patient entered the hospital to be treated for paralytic phenomena due to cerebral hemorrhage. There were no symptoms referable to the digestive tract, but the liver was rather large and hard. The patient succumbed to a sudden fatal hematemesis and autopsy disclosed that the liver was in an advanced stage of cirrhosis. This is the special complication of that form of cirrhosis in which there is scarcely any ascites. The portal hypertension was probably responsible for the hemorrhage. There was no rupture of a large vessel; the hemorrhage was the result of diffuse extravasation from the capillaries.

59. **Acute Malarial Apical Affection.**—De Brun, practicing in Constantinople, has had occasion to observe a number of cases of abrupt onset of a lung affection with high fever, delirium, incessant vomiting, constipation, absence of tympany, but moist tongue and mouth. He describes a typical example. The local findings were restricted to the apex on one side, where there was an area of total dulness with resistance to the finger, but no râles nor friction sounds, nothing to indicate secretion on the part of the epithelium of lungs or bronchi. The patients were generally from a malarial region, and the physician seldom thinks of auscultating, as there is no cough nor expectoration. In the 123 cases observed, 32 of the patients were under 10, 35 between 10 and 15, 21 between 15 and 20, and 32 between 20 and 30, with 3 others up to 65 years of age. Under quinin the symptoms rapidly subside, and it is amazing to witness the prompt softening of the consolidated patch of lung. In a few rare cases the lung changes persist, but as they never induce a febrile reaction nor infectious phenomena, they remain merely as an infirmity of that part of the lung, never becoming an alarming complication in themselves.

60. **Prolonged Retention of After-Birth.**—Garipuy discusses the difficulties of diagnosing retention of the after-birth after abortion, when the placenta is still adherent and thus retains its vitality. The uterus tolerates the placenta in this case as a physiologic element, not a foreign body. The only reliable means of diagnosis is by physical examination. The os in these cases generally is closed, and the uterus does not return to its normal size. This is an important aid in diagnosis if the patient had been examined before gestation, so that the physiologic size of the uterus is known. Examination of the uterus again after a considerable interval will show whether it remains stationary in size or increases or diminishes. This would eliminate the possibility of another pregnancy. In some cases the shape of the uterus may be instructive, although there are many exceptions to the rule that the organ is round only in case of gestation. The special consistency of the walls is important, as the organ is not as hard as a normal or fibromatous uterus, nor is it as soft as a gravid uterus. It will be found between these two conditions. This special consistency may be observed throughout all its walls or only in parts. The organ is not tender. When all other means have failed, then digital examination of the interior of the uterus will not only confirm the diagnosis of retention of the placenta, but will accomplish its removal.

Archiv f. klinische Chirurgie, Langenbeck's Berlin.

63 (LXXXII, No. 1, pp. 1-280.) *Importance of Tuberculosis of the Bladder and Its Curability. (Blasentub. und Heilbarkeit.) T. Rovsing.
64 Preventive Treatment of Tetanus by Antitoxin. (Zur Tetanusfrage.) M. Busch.
65 Traumatic Ossifying Myositis. (Myositis ossif. traum.) Röpke.
66 Thiosinamin in Therapeutics. (Thiosinamin als Heilmittel.) L. P. Wolf.
67 *The Nasopharyngeal Cavity. (Zur Klinik und Chirurgie des Nasen-Rachenraumes.) W. Pineus.
68 Typical Fracture of the Radius. (Klassisch. Radiusbruch.) Lilienfeld.
69 Two Cases of Pseudarthrosis of the Neck of Femur After Fracture in Youth. (Pseudarthrose des Schenkelhalses.) Kotzenberg.
70 Entire Absence of Head and Neck of Femur. (Seltener Befund bei cong. Hüftgelenkluxation.) O. Hartmann.
71 *Acute Pancreatitis. (Sogenannte acute Pancreatitis.) L. Bornhaupt.
72 Importance of the Accessory Mechanism in Injuries of the Extensor Mechanism of the Knee. (Bedeutung des Hülfsapparates bei Verletzungen des Streckapparates des Kniegelenkes.) A. Wedensky.
73 Audible Slipping of the Tendon of the Gluteus Maximus Due to Mechanical Loosening of the Tendon Attachment. (Sehnengleiten durch Lockerung der Sehnenanheftung.) C. Bayer.
74 *Decapsulation of the Kidney. (Entkapselung der Niere.) E. Müller.
75 *Treatment of Bullet Wounds of Peripheral Nerves by Mobilization of the Nerves and Making a New Passage for Them Between Sound Muscles. (Tubulisation und Verlagerung der Nerven.) Hashimoto and H. Tokuoka.

63. **Curability of Tuberculosis of the Bladder.**—See abstract in THE JOURNAL, vol. xlvii, page 903, 1906.

67. **The Nasopharyngeal Cavity.**—In this monograph of 54 pages Pineus describes the experiences at von Bergmann's clinic at Berlin. He reviews the differentiating points and indications for operative treatment of the various lesions in this region, and describes 18 cases in which an operation was undertaken. Temporary resection of the upper jaw was necessary in most of the cases to obtain ample access. In 2 in-

stances the lower jaw was temporarily resected, allowing access to tumors not too high up for this measure. By extensive removal of the tumors into sound tissue the tendency to recurrence was effectually combated, even in this comparatively difficult region.

71. **Acute Pancreatitis.**—Bornhaupt reports 2 cases and sifts the literature on this subject. The serious symptoms compelled operative intervention in his cases, but neither patient survived the operation. There was no arteriosclerosis nor gallstone. Both patients were about 60 years old, and the affection developed with a sudden, stormy onset. The pains were localized in the epigastrium, but one patient complained also of pains and tenderness in the ileocecal region. The general appearance was not much altered; there was no fever, and the pulse was good. The tongue was dry and parched, and there was vomiting at first, with loss of appetite, but vomiting did not occur after the first day in one and gradually declined in the other case. This violent bilious vomiting at first, then rapidly subsiding, is a striking sign of the affection in question. Both patients suffered from retention of feces and flatus, although large amounts of fluid could be introduced readily into the bowels without hindrance, indicating the absence of any obstruction low down. In one case it proved possible to induce partial evacuation of the bowels by injection of oil, but after this single stool, nothing further in this line could be accomplished. The abdomen was moderately distended, but soft, with complete absence of peristalsis, the intestines, especially the large intestine, were unusually relaxed. The omentum was bunched at a few points, palpated as a "vague resistance"; Doberauer has observed the same with acute pancreatitis. Traces of sugar were noted in the urine in the case, with diffuse changes in the pancreas, and necrotic discoloration of the entire gland. The lack of any specially distended, stiff loop of intestine speaks against occlusion from a tumor or other obstacle. When confronted with the syndrome described, the possibility of acute pancreatitis must not be forgotten. Microorganisms were found in the pancreas itself in only 14 out of the 74 cases collected by Truhart. The amount of hemorrhagic effusion which escapes into the abdominal cavity in some cases and the extent of the fat tissue necrosis are not responsible for the fatal outcome. Death is evidently due to absorption of poisons from the diseased pancreas, and the tension in the retroperitoneal tissue around the pancreas evidently promotes absorption. This fact must be borne in mind in operating, and provision must be made for reducing the tension and for improving the condition of the circulation through the gland. By this means it may be possible to check the poisoning of the organism from the decomposing gland by exposing and draining it directly. It is also possible that immunization with trypsin may prove effectual in treatment of acute pancreatitis or as an adjuvant to operative measures. Guleke and G. von Bergmann's experimental researches have demonstrated that the secretion from a diseased pancreas not only diffuses into the vicinity and splits the fat, but is absorbed by the lymphatics and carried away by them, causing fat tissue necrosis along their route. On this theory they treated dogs with trypsin and found that it was possible to immunize them against fat tissue necrosis by this trypsin immunization. Dogs with fat tissue necrosis, not thus immunized, died in a few hours after implantation of pancreas or injection of sufficient amount of trypsin. If these experiences with trypsin immunization are to be confirmed clinically, an early diagnosis of pancreatitis is imperative.

74. **Decapsulation of the Kidney.**—Müller reports numerous trials on animals of Edebohl's method of decapsulation of the kidney, which he has also applied three times in the clinic. The results were all good, showing remarkable development of vessels in the encircling omentum, and thus ensuring better conditions for the functioning of the organ. He therefore styles the operation as important and useful, actually lifesaving in some cases, but he suggests as a better and more descriptive term "epiplonephroplastics"—the term for omentum in the Latin languages being epiploon.

75. **"Tubulization" Treatment of Injured Nerves.**—Hashimoto and Tokuoka report 2 cases of bullet injury of the nerves leaving persistent pain in the calf in one case and anesthesia and paralysis of part of the hand in the other. In both cases the nerves involved were found embedded in cicatricial tissue. Treatment was restricted to mobilizing the nerve and moving it over to a region where it lay between layers of sound muscle, apart from the injured region. The improvement was evident in a few days, the pains subsided completely in less than two weeks, and by the end of six months function was almost normal—amounting to a practical cure. They have operated on the nerves in 38 cases, using various technics as they describe in detail, but the results were equally as good with the simple displacement of the nerve, related above, as with the more complicated procedures.

Berliner klinische Wochenschrift.

76 (XLIV, No. 18, pp. 553-588.) *Firearm Wounds of Thorax Accompanied by Rigidity of Abdominal Walls Without Injury of Abdomen. (Thoraxschüsse und Bauchdeckenspannung.) O. Hildebrand.
77 *Streptococcus Erythema and Relation to Scarlet Fever. (Streptokokkenerytheme.) G. Gabritschewsky.
78 Osteomata as Exostoses, Bones in Skin and Tendons. (Haut- und Sehnenknochen, etc.) W. Koch.
79 Typhoid Immunization. (Typhusimmunisierung.) F. Meyer and P. Bergell.
80 Antiagressin Typhoid Serum. (Typhus und Typhusserum.) H. Aronson.
81 *Gastric Cancer and Surgery. (Magenkrebs.) W. Kausch. (Concluded.)

76. **Rigidity of Abdominal Walls with Firearm Wounds of Thorax.**—Hildebrand relates some examples of bullet wounds of the chest in which the rigidity of the abdominal walls suggested injury of the abdomen, when in reality the abdomen was intact. He explains the rigidity in these cases as due to the intermediation of the intercostal nerves, and warns that this sign should not be accepted blindly as an indication of injury of the abdomen.

79. **Streptococcus Erythema and Relation to Scarlet Fever.**—Gabritschewsky announces that his streptococcus vaccine is able to induce an erythema resembling in every respect that of scarlet fever. As the streptococci are killed before the individuals are inoculated, the facts observed demonstrate for the first time the existence of a specific streptococcus toxin. He reports experiences at Moscow with large numbers of children, adding that none of the other curative sera induce the production of the scarlatinal eruption, and still less, the combination of sore throat, vomiting, raspberry tongue, etc., characteristic of scarlet fever, which follow inoculation with the streptococcus vaccine. The "vaccination scarlet fever" is distinguished from true scarlet fever by its milder and more rapid course and by the absence of contagion of others.

81. **Gastric Cancer and Surgery.**—Kausch concludes his study of statistics and the experience of various surgeons, including his own, by reiterating that cancer should be suspected when a patient of 40 or over presents gastric disturbances which do not soon subside and are evidently not of a nervous nature, when the patient is losing weight and looks pale. If there is hyperacidity or reduction of free acid, and if the proportions of acid and ferments grow constantly less on examination at regular intervals, or if lactic acid appears, the surmise of cancer is strengthened, and exploratory laparotomy should follow without delay. Some patients might be thus needlessly operated on and possibly even be harmed by the operation, but incomparably more could thus be delivered from the clutches of malignant disease.

Deutsche medizinische Wochenschrift, Berlin and Leipsic.

82 (XXXIII, No. 21, pp. 833-872.) *Septic Affections and Acute Leukemia. (Septische Erkrankungen und ak. Leukämie.) W. Erb, Jr. (Strasburg).
83 *Sensory Symptoms in Cerebral Affections, Especially Temperature Symptoms. (Sensible Reizerscheinungen bei Grosshirnkrankung. Insbes, über Kälteanfälle.) M. Lewandowsky.
84 *Arteriosclerosis and Physical Exercise. (Art. und Gymnastik.) K. Hasebroek.
85 *Traumatic Origin and Operative Treatment of Paralysis of the Serratus. (Serratuslähmung.) O. Samter.
86 Plug of Cotton Found in Pus in Appendicitis. (Watteropf im Eiter bei App.) Ullmann.
87 Regulations for Official Examination of Nurses. (Staatliche Prüfung von Krankenpflegepersonen.) Dietrich.
88 The Regulations for the Army Medical Corps in Austria. (Militärsanitätswesen.) Myrdacz. Id. in Greece. Merminigas. Id. in England, R. H. Firth. (Commenced in No. 20.)

82. **Septic Affections and Acute Leukemia.**—In this last article from the pen of the recently deceased son of Professor Erb of Heidelberg, a case is described in which streptococcus sepsis was combined with lymphomatosis and the lymphemic blood picture. He believed that the septic infection was secondary to the leukemia.

83. **Sensory Disturbances with Cerebral Lesions.**—Lewandowsky describes a few cases of sensory disturbances accompanying organic affections of the brain. In 2 cases the patients complained of pain suggesting migraine, occurring after a hemorrhage in the other hemisphere of the brain. There had been no tendency to migraine before. Another patient with Jacksonian epilepsy had attacks of an intense sensation of cold on the same side as the epilepsy. The sensation of intense cold was sometimes combined with pain, and the attacks recurred once to thrice a day, lasting from a few seconds to minutes. The only accompanying symptom was formication around the corner of the mouth.

84. **Arteriosclerosis and Exercises.**—Hasebroek assumes that the peripheral vessels play an active part in the circulation, and describes the principles by which arteriosclerotics are able to obtain pronounced benefit from apparatus gymnastics. He aims to insure ample exercise without increasing the blood pressure. In an experience of 17 years in a Zander institution he has never witnessed any mishaps from the exercises, even in cases of severe anatomic sclerosis of the aorta and coronaries, the patients always feeling better after the exercises. Climbing stairs is more dangerous for arteriosclerotics than even the active Zander movements. By daily stimulation of the peripheral circulation with these individualized exercises, the functions of the body in general are promoted and waste matters eliminated better.

85. **Traumatic Paralysis of the Serratus.**—Samter found that normal function was restored to the arm after he had transplanted the tendons of the lower half of the pectoralis major into two holes drilled in the lower scapular angle. The raised arm was then immobilized. The patient was a girl of 11 who had fallen on the scapula, with resulting paralysis of the serratus.

Deutsche Zeitschrift f. Chirurgie, Leipsic.

89 (LXXXV, *E. v. Bergmann Festschrift*, pp. 1-812.) Radical Early Resection of Tuberculous Elbow (Frühresektion des tub. Ellenbogengelenkes überhaupt, sowie bes. im kindlichen Alter.) Bardenheuer.
90 Suppuration of Kidney in Pregnancy. (Niereneiterungen in der Schwangerschaft.) Barth.
91 Deforming Inflammation of Hip Joint in the Young. (Arthritis deformans bei jugendlichen Individuen.) Borchard.
92 Two Cases of Brain Tumors. (Hirntumor.) Tilmann.
93 Aphorisms on Appendicitis. (Zur App.) F. v. Mangoldt.
94 Transperitoneal Exposure of Spine. (Transperit. Freilegung der Wirbelsäule bei tub. Spondylitis.) W. Müller.
95 Volvulus of Stomach. (Volv. des Magens.) A. Neumann.
96 Acute Dilatation of Stomach with Congenital (?) Stenosis of Pylorus and Torsion of Distal Two-thirds of Small Intestine. (Akute Magenerweiterung, etc.) K. G. Lennander.
97 Traumatic Extradural Hematoma. (Beitrag zum traum. extraduralen Hämatom.) Enderlen.
98 Operations for Habitual Luxation of Shoulder. (Habit. Schulterluxation.) Perthes.
99 Postoperative Thrombo-Embolism. (Postop. Thrombo-Embolie.) O. Witzel.
100 Finer Structure of Bone Shaft and Its Polarization. (Feinere Struktur der Röhrenknochens und dessen Pol.) Ziegler.
101 Solitary Fibromyoma in Transverse Colon. (Sol. Fibromyom in Quercolon.) C. Lauenstein.
102 Surgical Treatment of Appendicitis in Hernial Sac. (Epityphlitis im Bruchsack.) O. Kappeler.
103 Luxation of Ulnar Nerve. (Lux. des Ulnarnerven.) F. J Rosenbach.
104 Experimental Study of Aseptic Suppurations. (Aseptische Eiterungen.) L. Burkhardt.
105 Dislocation of Toes. (Luxation der Zehen.) F. Klaussner.
106 The "Influenza Knee' as Characteristic as Podagra for Gout. (Influenza-Knie.) F. Franke.
107 Fracture of Neck of the Radius. (Frakt. des Collum radii.) H. Flörcken.
108 Acute Intestinal Invagination in Children. (Ak. Darminvagination im Kindesalter.) P. Klemm.
109 Further Experimental and Clinical Study of Torsion of Pedicle of Intraperitoneal Organs and Tumors. (Stieldrehung intraperit. Organe und Geschwülste.) E. Payr.
110 Cause of Deformity from Weight-bearing and Allied Joint Affections. (Belastungsdeformitäten und verwandte Gelenkerkrankungen.) A. Stieda
111 Dressing of Wounds in Battle. (Wundverband im Kriege.) J. Fessler.
112 *Points in Treatment After Sacral Operations for Rectal Cancer. (Nachbehandlung der wegen Rektumcarcinoma sakral Operierten.) J. Hochenegg.
113 Operative Attitude in Respect to Acute, Progressive Infectious Encephalitis. (Op. Stellungnahme zur Encephalitis.) P. L. Friedrich.
114 Diverticula in Esophagus. (Oesophagusdivertikeln.) M. Martens.
115 True Lateral Accessory Thyroid Glands. (Ueber wahre laterale Nebenkröpfe.) E. Payr and A. Martina.
116 Traumatic Aneurisms in Russo-Japanese Campaign. (Traum. Aneurysmen im Jap.-Russ. Kriege.) K. Saigo.
117 *Remote Results of Radical Removal of Cancer of the Lip and Technic of Extirpation of the Glands. (Heilungsergebnisse beim Lippenkrebs.) W. Armbrecht.
118 *Lengthwise Fractures of the Patella. (Längsfrakt. der Pat.) A. Meyer.
119 Case of Accessory Pancreas in Stomach Wall. (Acc. Pankreas in der Magenwand.) Thelemann.
120 Experimental Study of Disturbances in Circulation in Mesenteric Region. (Zirkulationsstörungen im Mesenterialgebiet.) Niederstein.
121 Congenital Hernia of Umbilical Cord. (Angeb. Nabelschnurbruch.) R. Schültze.
122 Localization of Exostoses in Knee. (Lok. der Exostosen im Kniegelenk.) J. Riedinger.

112. **After-Treatment of Rectal Cancer.**—Hochenegg expatiates on the extreme importance of the after-care as deciding the success of radical extirpation through the sacrum. He keeps the patient lying on his side instead of on the back, and arranges the bed so the pelvis is on a lower plane than the abdomen and trunk. This technic is modified only in case of much venous after-hemorrhage and prolapse of intestines against the wound. If there is retention of urine after the operation he does not allow it to go without catheterization longer than twelve hours. If the wound becomes soiled with feces he opens it again, rinses and packs loosely with iodoform gauze. After complete healing the bowels must be thoroughly emptied.

117. **Cancer of the Lips.**—Armbrecht insists on the importance of radical extirpation of the system of glands, and advises doing it before excising the cancer.

118. **Longitudinal Fracture of the Patella.**—Meyer states that although this form of fracture takes long to heal, it has the advantage that it does not entail functional disturbance afterward.

Münchener medizinische Wochenschrift.

123 (LIV, No. 19, pp. 921-967.) *Curative Antimicrobian Serum from Animals Inoculated with Yeast. (Neues tierisches Heilserum.) R. Deutschmann (Hamburg).
124 *Nature of Frostbites and Treatment with Artificially Induced Hyperemia. (Erfrierungen und künstliche Hyperämie.) C. Ritter.
125 *Operations for Gallstone Ileus. (Gallensteinileus.) Brentano.
126 Infection with Strongyloides intestinalis. (Anguillula.) H. Bruns.
127 Probable Negative Action of Stovain on Motor Functions of Intestines. (Stovain in den Lumbalsack.) O. Rolth.
128 Fourth Case of Atoxyl Intoxication. (Atoxylvergiftung.) L. Waelsch.
129 Mitten for Electro-Massage. (Elektromassagehandschuh.) G. Arndt.
130 *Duck Cases for 12 Small Sets of Instruments. (Rahmentaschen.) W. Liepmann.
131 Improved Vaginal Speculum. (Modifikationen an einem zweiblätterigem vaginalspekulum.) H. Marcus.
132 Device for Fastening Dressings on Penis. (Fixierung von Verbandstoffen.) P. F. Becker.

123. **Serum from Animals Inoculated with Yeast Effectual Antiserum in Microbian Affections.**—Deutschmann has found that serum from animals inoculated with progressively increasing doses of yeast is proving very effectual in treatment of pneumonia and various streptococcus and staphylococcus affections, and to a certain extent also in tuberculosis. He relates 21 cases of pneumonia treated with it, to illustrate its efficiency in enhancing the resisting powers. The most striking results were obtained with it in infectious processes in the eyes. He advocates its use as a prophylactic before operations and in case of accidents to the eyes.

124. **Treatment of Frozen Parts with Artificial Hyperemia.**—Ritter discusses the nature of the process of local freezing of the tissues, and then describes his experiences with artificially induced hyperemia in treatment in 150 cases. They demonstrate beyond question the advantages of the various procedures for inducing local hyperemia. Superheated air acts most promptly and powerfully, and is especially effectual in chronic processes, but constriction hyperemia is best adapted for the acute cases. It is fortunate that there are so many ways of inducing hyperemia to meet the indications of each individual as they arise. Hyperemia is contraindicated in case of general freezing, as general hyperemia drains too much blood away

from the heart to the periphery and heart failure is the result, as in case of extensive burns.

125. **Significance of Facets on Gallstones.**—In the case of gallstone ileus related, a large impacted gallstone was found in one of the lower loops of the ileum. On its upper surface was a circular facet, extending over the entire diameter. The abdomen was sutured, but symptoms recurred, requiring a second laparotomy two weeks later. A gallstone, fully as large as the first, with a circular facet on its lower surface, was found at the point where the intestine had been sutured. Signs of peritonitis were apparent and the patient did not long survive. The second gallstone had worked its way downward to the point where the intestine had been sutured and there was arrested, causing the recurrence of the ileus. Brentano urges the necessity for search for a second gallstone when a facet is found on a gallstone. This is particularly important when the facet is round and large, as it indicates the presence of a twin gallstone. If the facet is on the anal side of the gallstone it is possible that the second gallstone, responsible for the facet, may have already passed on out of the intestine. The incision should be made in the vicinity of the umbilicus in case of gallstone ileus, as this permits a better view, and the stone is generally found in one of the lower loops of the ileum.

130. **Pockets for Carrying Instruments.**—Liepmann extols the advantages of keeping sets of instruments in duck pockets. The duck is stretched over a rectangular metal frame, the cloth extending an equal distance beyond the frame on each side, thus forming four flaps. A few instruments are laid on the duck and the flaps folded over them, with no attempt to hold the instruments in place with straps or other devices. Each pocket is labeled with the special set of instruments contained. The pocket cases are easily washed and sterilized and pile up conveniently in the instrument case or sterilizing box.

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Last indexed, XLVIII, p. 1823.

133 (XLII, *L. v. Schroetter Festschrift*, pp. 1-544.) Compensation in Case of Congenital and Acquired Lung Defects in Respect to Form and Functional Capacity of the Body. (Ausgleich, etc.) C. Bäumler.
134 *Gonorrheal Origin of Vertebral Rheumatism. (Rhumatisme vertébral.) C. Bouchard.
135 Miliary Fever from Anatomic Etiologic and Epidemiologic Standpoints. (Schweissfriesel.) A. Welchselbaum.
136 *Diagnosis and Clinical Significance of Symptomatic Varicocele with Malignant Kidney Tumors. (Sympt. Varikokele bei Nierentumoren.) J. Hochenegg.
137 Study of the Derivatives of Pyrrol. (Pyrazolon Derivate.) R. Kobert.
138 *Operations for Cancer of the Larynx. (Op. wegen Krebs des Kehlkopfes.) O. Chiari.
139 *Importance of Laryngeal Tuberculosis in Treatment of Pulmonary Tuberculosis. (Kehlkopftuberkulose, etc.) H. Burger.
140 Respiratory Movements and Dyspnea in Pathologic Conditions. (Atembewegungen und Atemnot in krankhaften Zuständen des Organismus.) Pieniazek.
141 *Glandular Fever. (Drüsenfieber.) W. Lublinski.
142 *Spasmodic Contraction of the Bronchi. (Bronchospasmus.) M. Grossmann.
143 Chest and Falsetto Voice. (Brust- und Falsettstimme.) J. Katzenstein.
144 Intermittent Fever with Visceral Syphilitic Processes, Especially in the Liver. (Fieber bei viszeraler Syph.) J. Mannaberg.
145 *Severe Intestinal Affection Occasioned by Malaria. (Durch Malaria bedingte Darmaffekt.) G. Kobler.
146 Headache of Nasal Origin. (Kopfschmerz nasalen Ursprungs. L. Rethi.
147 *Multiple Papillomas of Larynx. (Pap. des Kehlkopfes.) E. Baumgarten.
148 *Diagnosis and Treatment of Carcinoma of the Larynx. (Larynxkarz.) J. Sendziak.
149 History of Laryngology in the United States Since Introduction of Laryngoscope. (Geschichte der Laryngologie in den Ver. Staaten). J. W. Gleitsmann.
150 Hernia of the Diaphragm with Roentgen Examination. (Zwerchfellhernie.) R. Kienböck.
151 "Atypical Cases" in Hematology. (Hämatologie.) K. Helly.
152 Palpable and Movable Kidneys in Infants. (Nieren im Säuglingsalter.) K. Leiner.
153 Bacterial Flora of Mouth. (Bakt. der Mundhöhle.) V. Mucha.
154 *Tuberculosis of Kidney and Low Arterial Pressure. (Nierentub. und art. Hypotension.) K. Reitter.
155 Behavior of Blood Pressure After Injection of Tuberculin. (Blutdruck nach Tub-Injektion.) F. Bauer.
156 Interpretation of Arrhythmia of the Heart Shown by Esophageal Cardiogram. (Deutung des Herzarrhythmien.) O. Minkowski.
157 Etiology of Edema of Larynx. (Kehlkopfödem.) P. Heymann and A. Meyer.
158 Spontaneous Cure of Maxillary Sinusitis and Efficacy of Endonasal Irrigation. (Kieferhöhlenempyeme.) A. Onodi.
159 Terminology of Heart Action Before Skoda. (Herzaktion vor Skoda.) M. Sternberg.
160 Changes in Shape of Tubercle Bacillus. (Pleomorphie des Tub.-Baz.) A. R. v. Weismayr.
161 Case of Cavernous Lymphangioma of Posterior Wall of Throat. (Lymph. cav. der hinteren Rachenwand.) M. Weil.
162 Carcinoma and Sarcoma of the Gall Bladder in a Case of Cholelithiasis. (Plattenepithelkarz. und Sark. der Gallenblase.) K. Landsteiner.
163 Relations Between Affections of Nose and Eye. (Beziehungen zwischen Krankh. der Nase und des Auges.) P. Reinhard.
164 *Tumors on Auditory Nerve. (Akustikustumoren.) G. Alexander.
165 *Diagnosis and Clinical Course of Mycotic-Embolic Aneurisms and Ruptures of Vessels and Influenza Endocarditis. (Aneurysmen, Gefässrupturen und Influenzaendokarditis.) M. Weinberger.
166 Diagnosis of Slow Occlusion of Pulmonary Artery. (Verstopfung der Lungenart.) H. Weiss.
167 Glandular and Other Cysts in Nasal Polypi. (Zysten in Nasenpolypen.) H. Lowy.
168 *Accurate Diagnosis of Tumors in Lung. (Bronchogenes Karz. mit Glykogen-Bildung.) H. v. Schrötter.

134.—See editorial in THE JOURNAL, June 1, 1907, page 1870.

136. **Symptomatic Varicocele in Case of Malignant Disease in the Kidney.**—Hochenegg relates a case in which a tumor in the kidney, larger than a child's head, caused no symptoms and was not discovered until its pressure on the spermatic vein caused an annoying varicocele. The symptomatic varicocele differed from the idiopathic variety in that it affected an elderly man, that it developed rapidly, caused no pain, and that change of position and pushing the kidney tumor up or down had no effect on its contents. The tumor in the case described occluded the spermatic vein by direct compression and by proliferation into the lumen of the vein, also by compression from glandular metastases, all of which contraindicated its ablation.

138. **Operations for Cancer of Larynx.**—Chiari states that 6 of the 32 patients treated by simple thyrotomy for removal of the cancer are in good health from one to three years after the operation, and 7 for from three to seven years. In 4 cases the operation was done quite recently. One patient died and recurrence was observed in 12. In 27 other cases, treated by partial extirpation of the larynx, 8 of the patients died within three weeks and 13 have presented recurrence, but 3 were cured for from one to three years, and 2 from three to eight years; in 3 cases the operations were of recent date. In 2 other cases the entire larynx was removed, and one of the patients is stilll living after three years.

139. **Laryngeal Tuberculosis.**—Burger reports three cases of advanced laryngeal tuberculosis in which the patients were cured by energetic local and general measures, and have been in good health for from eight to eleven years. One of the patients is a clergyman. The voice is now normal in all, and coexisting tuberculous lesions in the lungs healed with the laryngeal process. He curettes or cauterizes and then applies lactic acid, full strength, repeating the procedures again and again. He gives illustrations of the findings in the larynx before and after treatment. One patient was a woman who has since passed through two pregnancies without recurrence, although a circumscribed redness was apparent during pregnancy at the site of the former lesions. Great patience and perseverance are required, and local measures are indispensable. In advising a patient to go to a sanatorium one should be selected where local treatment of the laryngeal lesions can be continued, otherwise the patient is liable to return from the sanatorium with the laryngeal process aggravated, and this in turn is unfavorable for the prognosis of the pulmonary affection. Even palliative surgical measures are often a great relief.

141. **Glandular Fever.**—Lublinski explains the so-called glandular fever as a septic pyemic affection from infection of the upper air passages, not specific in any way. The streptococcus seems to be the chief microbic agent.

142. **Spasmodic Contraction of the Bronchi.**—Grossmann devotes 28 pages to a historical sketch of the subject and then relates the results of experimental research and presents various arguments to sustain the assumption of the contracting power of the musculature of the bronchi and the close functional connection between the conditions in the circulation

and the respiratory conditions. Disturbances in respiration are the result of changes in the circulation in the parts. This applies to asthma as well as to respiratory anomalies in general. Asthma does not differ from them except in the suddenness and intensity of its onset and disappearance. The bronchial muscle can not contract without interfering with the circulation in the parts, but circulatory disturbances can occur without bronchospasm. The degree and rapidity of the onset and disappearance of the circulatory disturbances determine the degree and duration of the respiratory disturbances.

145. **Choleriform Affection Due to Malaria.**—Kobler relates the history of a family in which several cases of a severe intestinal affection simulating cholera were observed. Two persons died in two and seven days and the others were very sick, with bloody stools, etc. The family had just come from a cholera-infected district, and examination of the blood revealed malaria germs, and the patients all recovered promptly under quinin.

147. **Multiple Papillomas of the Larynx.**—Baumgarten mentions that in his experience with multiple papillomas in adults the larynx was always as soft and transparent as a child's larynx. The patients were all blondes. He describes 7 cases in detail and reports a number in children. He removed several hundred papillomas from the throat of a lad of 14, with repeated after-operations in the course of a year. After puberty the lad grew more robust and the tendency to papilloma growth vanished. Almost all children affected with papillomas in his experience lived in poverty. None of these patients was of the scrofulous type. He states that in time the tendency to papilloma production ceases, generally with puberty, but also after a time in adults. On this account it is immaterial whether the growths are removed from within or without, but endolaryngeal operations avoid danger of subsequent stricture, although tracheotomy is sometimes necessary. The greatest danger is when measles is superposed on the papilloma tendency. None of the children survived an attack of measles, although some of them had passed through scarlet fever, diphtheria and other sicknesses without harm. He never applies local caustics and has not witnessed any benefit from iodin or arsenic internally, but extols the Löri operative technic as simple, easy, humane and, even without cocain, scarcely at all painful.

148. **Laryngeal Cancer.**—Sendziak continues his compilation of cases of laryngeal cancer and reviews the present status of diagnosis and treatment. His statistics include 304 cases before 1888 and 571 since. In 54 an endolaryngeal operation was undertaken and recurrence was observed in 37 per cent., with 11 absolute and 10 relative cures. In 227 cases thyrotomy was done, with recurrence in 39 per cent. and 35 per cent. of the patients cured (37 absolute and 42 relative cures). In 218 cases the larynx was partially resected, with recurrence in 32 per cent. and cures in 22 per cent. (27 patients showing absolute and 21 relative cures). In 376 the larynx was entirely removed, and recurrence was observed in 24 per cent.; 19 per cent. of the patients were cured (27 absolute and 43 relative cures). The total is thus 102 absolute and 116 relative cures in 875 cases, a proportion of 25 per cent. cured. The total mortality was 19.5 per cent. In 217 out of the total 875 cases the ultimate outcome is unknown. All this material is tabulated under various headings for comparison. The annual proportion of cures is shown to be constantly increasing while the annual mortality is constantly decreasing. The tables show further that since 1888 thyrotomy has a record of 54 per cent. cured; the endolaryngeal method, 40 per cent.; partial resection of the larynx, 24 per cent., and total, 23 per cent. The mortality with thyrotomy was by far the lowest, only 3.5 per cent. His conclusions are all in favor of this operation as giving better results in comparison to the seriousness of the operation than any other technic. The main point is an early diagnosis, and hoarseness is an important symptom, especially if of long duration. Chronic catarrhal affections of the vocal cords seem to afford a predisposition to malignant disease. Gradually increasing constant difficulty in breathing is also an important sign, also pain in swallowing, especially if it radiates to the ear on the affected side. The dysphagia is more pronounced with solid food, while with a tuberculous process more pain is experienced when fluids are swallowed. Swallowing is difficult, but not so very painful, while with cancer the reverse is observed. A unilateral laryngeal affection suggests cancer, especially when the process is diffusely uneven and the movements of the vocal cord affected are much impaired. In differentiating syphilis by specific treatment, it must not be forgotten that potassium iodid is liable to induce considerable improvement in cancerous lesions. This transient improvement, however, is generally followed by an aggravation of the process. Excision of a scrap for microscopic examination has been known to be followed by aggravation of the process, and hence should not be done unless absolutely indicated. It is not always possible to determine the malignant nature of the process from the scrap excised, and he is consequently inclined to advocate thyrotomy at once as a means for certain diagnosis and as the best therapeutic measure.

154. **Tuberculosis of the Kidney and Low Arterial Pressure.**—See editorial in THE JOURNAL for June 1, 1907, page 1870.

164. **Tumors Involving Auditory Nerve.**—Alexander reports two cases, with the findings in the labyrinth.

165. **Aneurisms and Ruptures of Vessels from Embolism.**—Weinberger has had occasion to observe a case in which a carpenter of 45 had suffered from recurring acute articular rheumatism and pleurisy, leaving extreme debility. Not long afterward his right wrist became swollen and a Bier elastic band was applied just below the elbow for twelve hours on two consecutive days. The swelling subsided, but he soon noticed a pulsating tumor which proved to be an aneurism in the radial artery, and signs of endocarditis and nephritis developed, with a fatal termination. Influenza bacilli were found in the endocarditic lesions in pure cultures, and suppurative infarcts elsewhere and ecchymoses testified to a general septic infection. He believes that the aneurism was of mycotic-embolic origin, the result of the endocarditis. The arteriosclerotic changes in the artery and the constriction of the arm may have been predisposing factors. In a second case a patient presented symptoms of severe endocarditis and ileus and died in sudden collapse. The ileus in this case was found to be the result of compression of the descending colon by blood pouring from the splenic artery, which had ruptured in consequence of a mycotic-embolic process. In a third case mycotic embolism of an artery in the brain was observed in the course of an ulcerative endocarditis. The patient was a gardener of 36; the basal arteries and aorta were comparatively sound. These cases emphasize the importance of mycotic-embolic destructive processes in the vessels in the course of endocarditis.

168. **Diagnosis of Lung Tumors.**—In the case described and illustrated, the carcinoma was located with the Roentgen rays and directly inspected by bronchoscopy. It was in the right main bronchus and finally involved the superior vena cava. The histology and histogenesis are analyzed.

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Last indexed, XLVIII, page 2169.

169 (XXX, No. 6, pp. 551-633.) Localization of Processes of Osteomalacia in White Rats in Relation to the Traction of the Muscles. (Osteomalacia dei topi albini, etc.) B. Morpurgo.

170 Anatomic and Experimental Study of Elements of Spleen. (Elementi costituvi della polpa splenica.) P. Foa.

171 *Routes of Conduction of Emanations of Radium from Eye to Central Nervous System. (Conduzione delle emanazione del radio.) A. Bonglovanni.

172 Study of Superficial Nerves in *"Ammocoetes branchialis."* (Nervi cutanei e terminazioni nella cute a nella mucosa orale.) R. Fusari.

173 Chromatophile Cells and Langerhans' Cells in the Skin. (Cellule cromatofore e di Langerhans nella pelle.) E. Bizzozero.

171. **Routes of Conduction of Emanations of Radium from Eye to Central Nervous System.**—This article issues from Tizzoni's clinic, where experiments have long been under way in regard to the action of radium on the morbid process in rabies. The radium is generally applied to the eye, and the latest research indicates that the emanations are transmitted to the brain by way of the optic nerve. There does not seem to be any transmission of the emanations after the optic nerve is divided.